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蝴蝶兰品种及其实质性派生品种鉴定 MNP标记法

Identification of Phalaenopsis varieties and their essentially derived varieties －MNP marker method

（征求意见稿）

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1. 前言

本文件依据GB/T 1.1—2020《标准化工作导则 第1部分：标准化文件的结构和起草规则》的规定起草。

请注意本文件的某些内容可能涉及专利。本文件的发布机构不承担识别专利的责任。

本文件由中华人民共和国农业农村部种业管理司提出。

本文件由全国植物新品种测试标准化技术委员会（SAC/TC277）归口。

本文件起草单位：江汉大学、农业农村部科技发展中心、武汉明了生物技术有限公司、福建省农业科学院作物研究所、上海市农业科学院、华南农业大学、云南省农业科学院质量标准与检测技术研究所、湖北省农业科学院经济作物研究所。

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蝴蝶兰品种及其实质性派生品种鉴定

MNP标记法

* 1. 范围

本文件规定了利用多核苷酸多态性（Multiple Nucleotide Polymorphism, MNP）标记法进行蝴蝶兰（*Phalaenopsis*）品种鉴定及其实质性派生品种鉴定的术语和定义、原理、主要仪器设备及试剂、引物相关信息、操作程序、数据分析、结果判定与表述。

本文件适用于蝴蝶兰品种鉴定及其实质性派生品种的鉴定。

* 1. 规范性引用文件

下列文件中的内容通过文中的规范性引用而构成本文件必不可少的条款。其中，注日期的引用文件，仅该日期对应的版本适用于本文件；不注日期的引用文件，其最新版本（包括所有的修改单）适用于本文件。

GB/T 3543.2 农作物种子检测规程 扦样

GB/T 6682 分析实验室用水规格和试验方法

GB/T 38551 植物品种鉴定 MNP标记法

* 1. 术语和定义

下列术语和定义适用于本文件。

* + 1. 多核苷酸多态性 multiple nucleotide polymorphism，MNP

在一段核苷酸序列中，由一个或多个核苷酸变异引起的序列多态性。

[来源：GB/T 38551，3.1，有修改]

* + 1. 实质性派生品种 essentially derived variety，EDV

由原始品种实质性派生，或者由该原始品种的实质性派生品种派生出来的品种，与原始品种有明显区别，并且除派生引起的性状差异外，在表达由原始品种基因型或者基因型组合产生的基本性状方面与原始品种相同。

[来源：中华人民共和国种子法，第九十条第十款]

* + 1. 平均覆盖倍数 average coverage

在基因组上比对到所有标记位点上的所有测序片段的总数与标记位点总数的比值。

[来源：GB/T 38551，3.4，有修改]

* + 1. 检出标记位点 detected markers

至少有一个等位基因型且有20条及以上测序片段支持的标记位点。

[来源：GB/T 38551，3.5，有修改]

* 1. 原理

蝴蝶兰品种及其实质性派生品种的基因组中存在着能够世代稳定遗传的MNP位点。利用多重聚合酶链式反应（PCR）、二代高通量测序以及生物信息学方法扩增、检测和分析品种MNP标记，获得MNP标记基因型及其在品种间的遗传差异，计算品种间遗传相似度，获得品种鉴定结论和实质性派生品种鉴定结论。

* 1. 试剂和材料

除非另有规定，仅使用分析纯试剂，实验用水符合GB/T 6682中规定的一级水的要求。

* + 1. 多重PCR扩增与文库构建试剂盒

应匹配MNP标记和标记检测引物，以及高通量测序试剂盒。

* + 1. 高通量测序试剂盒

应匹配高通量测序仪。

* + 1. MNP标记和标记检测引物

应符合附录A的要求。

* 1. 仪器设备
		1. 离心机

最大转速度不小于12000 rpm。

* + 1. 电泳仪
		2. PCR扩增仪
		3. 高通量测序仪

测序读长不低于300 bp。

* + 1. 计算机服务器
	1. 操作程序
		1. 样品准备

送检样品宜为幼苗、叶片、种子等组织或器官。

送检样品抽取的样本数量宜为30个以上。

样品需扦样时，应符合GB/T 3543.2的规定。

抽取的样本可以混合检测或单个个体检测。

* + 1. DNA提取

利用核酸提取试剂提取待测样品DNA。提取的DNA在260 nm与230 nm处的吸光度值的比值宜介于1.8~2.2，260 nm与280 nm吸光度比值介于1. 7~1.9。

* + 1. 多重PCR扩增与文库构建

按多重PCR扩增与文库构建试剂盒的说明书进行DNA质控、多重PCR扩增、文库构建与纯化。其中，多重PCR的扩增循环数不高于20次。

* + 1. 高通量测序

按高通量测序试剂盒和高通量测序仪的操作说明，对7.3中获得的高通量测序文库进行高通量测序。高通量测序时标记位点的平均覆盖倍数宜设置为700倍以上，测序片段总读长不小于300 bp。

* 1. 质量控制
		1. 环境

样品准备、DNA提取、多重PCR扩增、文库构建和高通量测序宜在规定的区域或相互隔离的区域按单一方向进行操作，不同区域的仪器设备需专用。

* + 1. 测序数据
			1. 高通量测序原始数据质量应满足所采用的高通量测序仪的操作手册中所规定的测序质量要求。
			2. 将样品的测序数据比对到参考基因组的标记位点上，统计第一次检测的标记位点的平均覆盖倍数C1。
			3. 当C1小于500时，判定样品的测序数据量不足，从7.4或之前的步骤开始重新实验至第一次检测的标记位点的平均覆盖倍数C1大于或等于500。
			4. 当C1大于或等于500时，进一步计算检出标记位点的比例$R\_{1}$。

$R\_{1}$按式（1）计算

$R\_{1}=\frac{T\_{1}}{T}×100\%$………………………………………………………（1）

式中：

$R\_{1}$——样品检出标记位点的比例；

$T\_{1}$——样品检出标记位点的数目；

$T$——样品检测标记位点的数目。

* + - 1. 当R1大于或等于95%时，判定测序数据合格；否则，从7.2或之前的步骤重新实验至第二次检出的标记位点的平均覆盖倍数C2大于或等于500。
			2. 当C2大于或等于500时，进一步计算第一次和第二次共同检出的标记位点的比例$R\_{2}$。

$R\_{2}$按式（2）计算

$R\_{2}=\frac{2T\_{12}}{T\_{11}+T\_{2}}×100\%$…………………………………………………（2）

式中：

$R\_{2}$——第一次和第二次共同检出的标记位点的比例；

$T\_{12}$——第一次和第二次共同检出标记位点的数目；

$T\_{11}$——第一次检出标记位点的数目；

$T\_{2}$——第二次检出标记位点的数目。

* + - 1. 当R2大于或等于95%时，判定测序数据合格。
1. 附录B提供了一个操作案例，其他满足DNA提取、文库制备和高通量测序的试剂、仪器设备均可。
	1. 数据分析
		1. 测序数据比对与记录
			1. 将测序数据同源比对到参考基因组上的每个MNP标记位点上。
			2. 位点的基因型指该位点的所有检出等位基因型，其中，检出等位基因型指从该标记第一个到最后一个碱基构成的检出DNA片段，不同检出等位基因型用“／”隔开。位点的基因型记录实例见附录B.8。
		2. 遗传相似度计算

遗传相似度按式（3）计算

$GS=\frac{n\_{ij}}{N\_{ij}}×100\%$…………………………………………………（3）

式中：

$GS$——待测品种与对照品种的遗传相似度；

$n\_{ij}$——待测品种与对照品种中均检出的但基因型无任何差异的标记位点的数目；

$N\_{ij}$——待测品种与对照品种中均检出标记位点的数目。

* 1. 结果判定
		1. 品种鉴定判定规则
			1. 当待测品种与对照品种的*GS*小于96%时，判定为“不同品种”；
			2. 当待测品种与对照品种的*GS*大于或等于96%时，判定为“疑同品种”。
		2. 实质性派生关系判定规则
			1. 当待测品种与对照品种的*GS*小于90%时，判定为“非实质性派生品种”；
			2. 当待测品种与对照品种的*GS*大于或等于90%时，判定为“疑似实质性派生品种”；
		3. 结果表述

待测品种 与对照品种 比较位点数为 ，差异位点数为 ，遗传相似度为 ，判定为 。

示例1：待测品种A与对照品种B比较位点数为418，差异位点数为5，遗传相似度为98.80%，判定为疑同品种。

示例2：待测品种A与对照品种B比较位点数为415，差异位点数为100，遗传相似度为75.90%，判定为非实质性派生品种。

**注：**结果表述也可采用表格形式，但需完整包含上述内容。

1.
2.

（规范性）

MNP标记和标记检测引物

MNP标记和引物序列见表A.1。

* 1. MNP标记和标记检测引物

| 编号 | 正向引物（5’－3’） | 反向引物（5’－3’） | 变异碱基位置、类型与比例 | 参照品种等位基因型 |
| --- | --- | --- | --- | --- |
| 糖果 | 小番茄 |
| 1 | AGGAGGATAGATTTGTGATCCAGAA | CCATCATTTGCAACATCAATACATCG | 50(G-100%);56(T-100%);57(C-100%,T-7%);65(G-100%);77(G-100%);85(C-100%);89(A-94%,T-32%);95(G-100%);97(C-100%);101(T-100%);118(A-100%);122(G-100%);132(C-99%,A-10%);137(A-60%,G-90%);141(C-46%,T-91%);143(A-94%,T-32%);158(A-100%);184(A-100%);190(G-8%,C-100%);217(A-55%,G-84%);220(G-8%,A-100%);228(C-82%,T-64%);236(A-100%);237(A-84%,T-55%); | G;T;C;G;G;C;T/A;G;C;T;A;G;C;G;C/T;A/T;A;A;C;G;A;C/T;A;A | G;T;C;G;G;C;A;G;C;T;A;G;C/A;G;C/T;A;A;A;C;G/A;A;C;A;A/T |
| 2 | CGTAATGGCACTCTATCCATTTTCG | ATTTCGATCCCGCCGCAC | 40(A-6%,G-98%);42(G-19%,C-98%);43(G-99%,T-32%);48(A-8%,G-100%);57(G-10%,A-98%);58(A-98%,T-10%);60(C-100%);63(C-8%,T-100%);66(C-100%);69(C-100%);70(C-100%);74(G-100%);76(T-100%);81(G-14%,A-99%);83(C-100%);86(G-7%,T-100%);87(G-97%,T-22%);108(G-100%);110(G-43%,C-98%);114(A-100%);118(C-21%,A-98%);120(A-22%,G-96%);123(G-100%);183(G-100%);185(A-14%,T-99%);201(C-44%,G-90%);210(C-22%,G-99%);213(C-14%,G-99%);225(G-100%,T-11%);228(G-99%,T-22%); | G;C/G;G;G;G/A;A/T;C;T;C;C;A/C;G;T;A;C;T;G/T;G;C;A;A;G;G;G;T;G;G;G;G;G | G;C;G/T;G;A;A;C;T;C;C;C;G;T;G/A;C;T;G;G;C;A;A/C;G;G;G;A/T;G;C/G;C/G/A;G;T/G |
| 3 | AAATGTACTTGAACATTCGGAGCAA | ATTCCAAAGAAGGGGTTTGTAATGG | 36(C-100%);42(A-100%);43(G-100%);47(C-100%);64(C-100%);68(C-100%);85(A-100%);138(G-100%);157(A-9%,T-100%);181(A-100%);194(G-10%,A-100%);196(A-94%,T-59%);197(A-9%,G-100%); | C;A;G;C;C;C;A;G;T;A;A;A;G | C;A;G;C;C;C;A;G;T;A;A;T;G |
| 4 | AGAATTATTGGATCAGAATCATTGAATCA | CGTACATTAGTTGATCAGGGTATGC | 47(C-93%,T-7%);49(C-100%); | C;C | C;C |
| 5 | GGCGCTGTAGTTGATCGATTTTTAT | AGCAAATTAAGAACATTCTTTCTCTTTCA | 36(G-6%,A-100%);37(G-100%);49(C-98%,T-27%);50(A-23%,T-99%);62(A-100%);64(G-28%,A-98%);89(G-100%,T-6%);124(A-100%);154(G-5%,A-100%);187(G-100%,T-6%);189(A-100%);190(T-100%);191(A-5%,G-100%);194(A-93%,T-62%);198(G-100%);203(G-21%,A-97%);220(C-6%,A-100%); | A;G;C;A;A;A;G;A;A;G;A;T;G;A;G;A;A | A;G;C;T;A;A;G;A;A;G;A;T;G;A;G;A;A |
| 6 | GGATAATTGAATCCAATATACCGGTT | GAAGATCGTACTATGCGGTTCTTTC | 40(A-6%,T-100%);44(T-100%);81(G-14%,A-100%);86(A-100%);117(G-100%);133(t-100%);135(G-5%,a-100%);186(A-100%,C-15%);189(A-100%);190(C-100%);191(T-100%);192(G-100%); | T;T;A;A;G;C/T;A;A/C;A;C;T;G | T;T;A;A;G;T;A;A/C;A;C;T;G |
| 7 | GACGTCGTTCTCAAGAAACTAGATT | CTAAAGTTGGCAGGGACATTCCAAT | 40(C-99%);48(C-13%,T-90%);52(A-96%);76(C-54%,T-69%);82(G-9%,T-99%);84(A-15%,t-93%);96(t-100%);133(G-69%,A-54%);158(G-10%,A-96%);176(A-99%);194(C-99%);227(A-35%,T-87%); | C;T;A;C;T;T;T;A;A;A;C;A | C;T;A;C;T;T;T;A;A;A;C;T |
| 8 | CTGCGACAGCTCTTGGAACT | TTCGTTTTCCTTCCCTTCCATTAAC | 34(G-100%);37(G-100%);40(T-100%);58(C-99%);85(G-100%);98(G-100%);103(C-100%);106(A-27%,G-100%);137(G-100%);138(A-6%,G-100%);140(A-100%);141(A-100%,G-25%);152(T-100%);156(A-100%);160(A-100%,T-25%);161(A-5%,T-99%);163(T-100%);172(G-100%);175(G-100%);176(A-32%,G-100%);177(A-15%,G-100%);182(A-100%,T-8%);185(G-100%);199(G-100%);200(G-100%);206(G-100%);207(G-100%,T-6%);215(A-100%); | G;G;T;C;G;G;C;G;G;G;A;G/A;T;A;T/A;T;T;G;G;G;A/G;A/T;G;G;G;G;G;A | G;G;T;C;G;G;C;A/G;G;G;A;A/G;T;A;T/A;T;T;G;G;G;G;A;G;G;G;G;T/G;A |
| 9 | GTCGATCTGGGAGACTTGATAAGG | CTCGTTCTTTCATCAGCTTTCTTGT | 41(G-100%);47(G-11%,A-100%);57(A-6%,G-100%);64(C-100%);84(C-21%,T-100%);113(A-65%,T-97%);120(G-100%,T-19%);125(A-100%);158(T-100%);185(C-100%);200(G-26%,A-100%);215(A-26%,C-80%,G-92%);218(T-100%); | G;A;G;C;T;A/T;G;A;T;C;A;G/C;T | G;G/A;G;C;T;T;G;A;T;C;G/A;G/A/C;T |
| 10 | TCTCTAACACTAGACAAAGGCACTT | CAACGCTAAGAGTCAATGTCAAGAC | 42(A-100%);53(C-12%,G-98%);86(A-91%,T-14%);87(C-13%,G-91%);97(A-58%,G-80%);106(A-6%,C-99%);112(C-91%,T-14%);116(A-12%,G-98%);117(C-97%,T-16%);121(C-100%);128(A-14%,G-91%);129(A-14%,G-91%);144(C-99%,T-15%);149(C-99%,T-15%);151(A-13%,G-98%);153(G-87%,A-14%);158(G-15%,T-99%);164(T-100%);193(G-100%);194(C-99%);195(C-15%,T-91%);196(G-91%,A-15%);200(G-98%);201(A-15%,G-99%);202(a-55%,T-75%);205(C-7%,t-100%);209(a-100%); | A/G;G;A;G;A/G;C;C;G;C;C;G;G;C;C;G;G;T;T;G;C;C/T;G/A;G;G;T/A;T;A | A;G;A;G;A;C;C;G;C;C;G;G;C;C;G;G;T;T;G;C;T;G;G;G;T;T;A |
| 11 | TATCCATCCCTGAATCTAAGAAGGC | AGAAGAGGAATTCCAAAAGAAAATTGA | 41(C-100%);45(G-100%);47(G-100%);51(A-100%);53(G-100%,T-7%);61(C-100%,A-13%);62(C-13%,T-100%);73(C-9%,T-100%);79(C-100%);84(A-11%,G-100%);89(C-100%);90(A-100%,T-11%);91(C-96%,T-67%);96(T-100%);97(C-99%,T-23%);104(A-17%,G-100%);116(A-11%,T-100%);118(C-7%,T-100%);126(C-7%,G-100%);127(A-11%,C-100%);135(G-100%);138(G-18%,A-100%);140(T-100%);142(T-100%);153(G-11%,C-100%);159(A-96%,C-67%);182(A-100%);190(c-100%); | C;G;G;A;G;C;T;T;C;G;C;A;T;T;C;G;T;T;G;C;G;A;T;T;C;C;A;C | C;G;A/G;A;G;A/C;T/C;T;C;A/G;C;T/A;T/C;T;T/C;A/G;A/T;C/T;G;C/A;G;G/A;T;T;G/C;A/C;A;C |
| 12 | ATCAATGTAAAACGGAGGAACTTGT | GCAATACAATCCCTTAGCAATAGCA | 38(a-100%);39(C-8%,g-100%);42(g-100%);43(a-100%,T-8%);44(G-14%,a-100%,T-8%);45(g-99%,T-48%);51(a-100%);52(G-8%,t-100%);59(A-10%,t-100%);60(C-58%,t-97%);61(G-21%,a-100%);65(a-100%);75(a-100%);78(g-100%,T-7%);81(A-46%,G-99%);85(A-100%);88(C-8%,A-100%);89(G-100%);91(A-28%,T-99%);94(A-100%);96(A-10%,G-100%);98(G-56%,T-97%);99(T-100%);101(G-7%,A-100%);109(C-98%,T-30%);113(G-60%,A-96%);116(C-100%);117(C-39%,G-7%,T-99%);119(A-100%);130(G-100%);131(C-98%,T-51%);138(C-10%,T-99%);141(A-100%);142(A-100%);146(C-27%,T-100%);151(G-8%,A-100%);152(G-8%,C-100%);156(A-100%);158(C-14%,T-100%);160(C-100%,T-8%);161(A-8%,C-12%,T-99%);164(G-100%);165(C-100%);166(G-8%,A-100%);174(A-100%);175(G-8%,A-100%);178(T-100%);180(C-100%);183(A-36%,G-99%);184(G-99%,T-20%);185(C-52%,T-97%);191(T-100%);196(C-100%,T-8%);197(A-100%);198(A-64%,C-8%,G-95%);213(C-100%);217(G-100%);219(A-7%,T-100%);223(A-100%);228(A-6%,C-100%);229(C-36%,T-99%);230(G-9%,T-100%); | A;G;G;A;A;G;A;T;T;T;A;A;A;G;G;A;A;G;T;A;G;T/G;T;A;C;A;T/C;T;A;G;C/T;T;A;A;C/T;A;C;A;T;C;T;G;C;A;A;A;T;C;G;G;C/T;T;C;A;G;C;G;T;A;C;T;T | A;G;G;A;A;G;A;T;T;T/C;A;A;A;G;G;A;A;G;T;A;G;T;T;A;T/C;A/G;C;T;A;G;C/T;T;A;A;T;A;C;A;T;C;T;G;C;A;A;A;T;C;G;G;T/C;T;C;A;A/G;C;G;T;A;C;T;T |
| 13 | TCAACAATGATGAGCACTCAGACTA | TGTGACATCTCAGACTCTGTTGATC | 41(A-100%);44(C-97%,T-9%);46(C-100%);50(T-96%);51(G-94%,A-48%);52(G-94%,T-9%);55(C-66%,T-82%);86(C-100%);87(C-8%,A-100%);88(A-43%,G-96%);96(A-100%);105(A-100%);106(G-95%,C-24%);112(C-58%,T-86%);113(G-100%);114(A-95%,T-25%);116(A-43%,C-96%);125(C-100%);133(C-100%);135(G-100%);138(C-97%,T-15%);142(C-100%);149(A-100%);153(C-86%,T-58%);160(C-100%);161(C-10%,G-100%);171(A-100%);178(C-58%,T-87%);207(A-43%,C-96%);211(A-100%);215(G-100%);226(C-100%,T-11%);228(G-100%);231(C-100%);233(G-100%); | A;C;C;T;G;G;C;C;A;G;A;A;C;C;G;T;C;C;C;G;T;C;A;T;C;G;A;C;C;A;G;C;G;C;G | A;C;C;-;A;IG;C;C;A;A;A;A;G;C;G;A;A;C;C;G;C;C;A;T;C;G;A;C;A;A;G;C;G;C;G |
| 14 | CATCTACAACTTCACTTTCACAGCC | GTGGCACTGCTGGAACATTAG | 36(G-10%,A-100%);67(C-100%);68(T-100%);71(G-37%,A-100%);75(G-14%,C-100%);89(A-100%);100(A-100%);120(C-100%,T-11%);121(C-100%);124(A-100%,G-17%);125(T-100%);143(G-10%,T-100%);144(G-100%);150(g-100%);167(C-10%,t-100%);169(t-100%);179(T-100%);182(C-16%,T-100%);184(C-100%);185(G-10%,A-100%);187(C-98%,T-45%);191(G-100%);204(C-19%,G-100%);206(C-100%);207(C-100%,T-10%);208(C-100%);211(A-100%);223(C-100%,T-14%);224(G-10%,T-100%); | A;C;T;G/A;C;A;A;T/C;C;A/G;T;T;G;G;T;T;T;T;C;A;T/C;G;G;C;C;C;A;C;T | A/G;C;T;A;C;A;A;C;C;A;T;T/G;G;G;T/C;T;T;T;C;A;C;G;G;C;C/T;C;A;C;G/T |
| 15 | CAGCAACACAGTTGGCTAGAAGA | CGAAGTTCCCGTTTAAGCTGATTAT | 119(G-100%,A-19%);127(A-6%,C-100%);146(A-6%,G-100%); | G/A;C;G | A/G;C;G |
| 16 | CATCCGAGGATATAAACAACTTGGC | CAAACTCTAGCAATACCACCATTGT | 44(A-100%);50(G-100%);57(A-96%,T-60%);59(C-8%,T-100%);60(G-100%);62(C-100%);63(A-11%,G-100%);72(G-100%);73(A-9%,T-100%);80(A-19%,C-100%);81(G-100%);92(A-19%,G-100%);96(A-100%);108(G-100%);110(C-8%,T-100%);120(G-100%);127(T-100%);128(A-100%,T-19%);131(A-100%);135(T-100%);140(T-100%);143(C-12%,T-100%);152(A-100%);160(A-100%);182(C-60%,A-96%);186(G-100%);187(C-100%,T-19%);188(C-100%);189(A-6%,G-100%);200(A-100%,T-5%);204(A-84%,G-96%);207(A-42%,G-100%);215(C-80%,T-94%); | A;G;A/T;T;G;C;G;G;T;C;G;G;A;G;T/C;G;T;A;A;T;T;T;A;A;C/A;G;C;C;G/T;T/-/A;A/G;G;C/T | A;G;A;T;G;C;G;G;A/T;C/A;G;G/A;A;G;T;G;T;A/T;A;T;T;T;A;A;A;-/G;-/C/T;-/C;G/-;A;A/G;G;T/C |
| 17 | CTCTTTAACACGAACAGGAGCTATG | CCCCAGAAAAGCTCCTAATTTTAGC | 44(G-22%,A-100%);50(C-100%,T-22%);52(G-100%);60(C-100%);64(A-10%,G-100%);70(C-12%,G-100%);76(A-100%);79(A-22%,G-100%);82(G-10%,A-100%);86(C-100%);113(A-100%);118(G-100%);149(A-11%,G-100%);178(A-100%);187(C-8%,T-100%);202(T-100%);211(A-100%); | A;C;G;C;G;G;A;G;A;C;A;G;G;A;T;T;A | A/G;T/C;G;C;G;G/C;A;G/A;A;C;G/A;G;G/A;A;T;T;A |
| 18 | ATATTTCATCCACAAGGCTTGCAAT | CTTCTTATACAGGGGAGGAAAGCAT | 42(T-100%);156(G-99%,T-25%);195(C-25%,T-100%); | T;G;C/T | T;G/T;T |
| 19 | CTGTCGGGTGGGAATCTCCTA | GGAGAATGTCTGCAGAAAGATTCAA | 34(G-100%);36(C-98%,T-24%);38(A-100%);42(C-86%,T-72%);43(C-100%);44(C-24%,G-93%,A-47%);45(A-92%,G-63%);47(C-100%);52(A-47%,C-95%);53(G-100%);58(G-95%,T-47%);60(C-72%,G-86%);61(C-100%);64(G-100%);65(C-100%);80(A-95%,T-47%);81(G-100%);84(C-100%);92(G-100%);95(G-86%,T-72%);96(G-95%,T-47%);98(G-100%);119(A-9%,G-99%);120(G-99%,T-9%);125(C-96%,T-44%);126(A-47%,G-95%);130(G-100%);131(A-33%,G-100%);133(C-100%);144(G-100%);153(C-100%);163(C-96%,T-45%);164(G-98%,A-26%);167(C-95%,T-24%);170(G-97%);172(A-24%,C-95%);178(G-45%,T-92%);188(C-100%);193(C-100%);196(G-100%);200(A-72%,C-86%);204(T-100%);208(G-90%,A-68%);219(T-100%);223(C-79%,T-76%);228(T-100%);231(C-98%,T-25%); | G;C;A;T/C;C;G/A;G/A;C;C;G;G;C/G;C;A/G;T/C;A;G;C;T/G;G/T;G;G;G;G;C;G;G;A/G;C;G;C;C;A/G;C;G;C;T;C;C;G;A/C;T;A/G;T;T/C;T;C | G;C;A;T;C;G;A;C;C;G;G;C;C;G;C;A;G;C;G;T;G;G;G;G;C;G;G;G;C;G;C;C;G;C;G;C;T;C;C;G;A;T;G;T;T;T;C |
| 20 | GAGGCTTGGGATTTATTTTAGGCAA | AAACTTAAAGCTTTTTCATGGCCCA | 39(g-99%,T-7%);42(a-100%);62(G-19%,a-100%);74(G-100%);77(A-100%);79(G-100%,T-10%);80(G-100%);95(A-11%,T-100%);99(C-100%,T-23%);101(G-100%);102(A-100%);106(G-100%);143(G-100%,A-7%);149(A-100%,G-11%);158(G-100%,T-19%);162(A-5%,G-100%);164(G-100%,T-11%);178(A-100%);180(G-100%);215(C-10%,T-100%);216(G-100%);219(A-9%,G-100%); | G;A;A;G;A;T/G;G;A/T;C;G;A;G;G;G/A;G;G;G/T;A;G;T/C;G;A/G | G;A;A;G;A;G;G;T;C;G;A;G;G;A;G;G;G;A;G;T;G;G |
| 21 | AGAGTGATTAGATACATCTTTATAACTCAAA | TGAGATTGTATCTTTCATAAGAATTCACCT | 50(G-100%);52(C-100%);77(A-100%,T-11%);78(G-8%,C-100%);84(C-11%,A-100%);85(G-100%);86(C-34%,T-98%);112(C-100%);156(G-13%,A-100%);159(T-100%);174(G-13%,C-100%);176(T-100%);182(A-10%,G-100%);205(A-13%,G-100%);209(T-100%);210(G-5%,A-100%);217(T-100%);226(C-100%); | G;C;A;C;A;G;T;C;A;T;C;T;G;G;T;A;T;C | G;C/A;A/T;C/G;C/A;G;T/C;C;A;T;C;T;G;G;T;A;T;C |
| 22 | ACTGTATGACAACTCCGTATGCATA | CGTTGTTGAGTTCCCTCCTATATCT | 56(C-100%);63(A-39%,G-100%);72(A-98%,G-57%);89(G-9%,A-100%);90(G-98%,C-58%);97(G-21%,T-99%);125(T-100%);126(G-7%,C-100%);181(G-7%,A-99%); | C;A/G;A/G;A;C/G;T;T;C;A | C;G;A;A;G;T;T;C;A |
| 23 | AGTGATGGAGTTTAATTTCATTAAAATACTT | TTTTTCCATTGGAAGCCGTACC | 50(A-8%,T-99%);53(C-69%,T-77%);69(G-100%);70(C-20%,T-96%);79(T-100%);83(G-100%);95(C-100%);113(C-96%,A-20%);116(A-100%);123(T-100%);128(T-100%);137(G-18%,T-96%);139(C-100%);150(C-96%,A-20%);158(T-100%);179(A-100%);196(C-100%);199(C-100%);200(C-100%);207(T-100%);241(G-96%,C-20%); | T;C/T;G;T/C;T;G;C;A/C;A;T;T;T;C;A/C;T;A;C;C;C;T;G/C | ND |
| 24 | TCTAGAACTTGGTGGTGGCTAATAC | AATCTTATCAAACAATTCGCCTCCC | 37(A-14%,G-100%);70(C-15%,T-100%);92(C-100%);95(C-100%);104(G-100%,T-22%);110(T-100%);123(G-100%);127(T-100%);130(A-100%);131(A-100%);135(T-100%);136(G-100%);141(C-100%);149(A-8%,C-100%);150(C-100%);155(G-100%);166(C-100%);173(t-100%);197(G-100%);203(G-100%,T-8%);209(C-100%); | G;T;C;C;G;T;G;T;A;A;T;G;C;C;C;G;C;T;G;G;C | G;T;C;C;G;T;G;T;A;A;T;G;C;C;C;G;C;T;G;G;C |
| 25 | GCAAATGTGATCATTGTAATAGAAAAGCT | TCTGCTTCTCAAAATTCCTCTCTGA | 51(C-100%);73(T-100%);78(C-100%);90(C-100%);104(C-100%);105(T-100%);111(C-100%,T-33%);114(A-6%,G-100%);126(C-100%);128(C-100%);135(A-100%);138(G-100%);158(A-100%);166(A-100%);192(C-100%,a-25%);197(t-100%);198(a-100%);201(t-100%);222(A-8%,C-100%); | C;T;C;C;C;T;T/C;G;C;C;A;A/G;A;A;A/C;T;A;T;C | C;T;C;C;C;T;T/C;G;C;C;A;G;A;A;C;T;A;T;C/A |
| 26 | GCCCATCAACAAAGAAGTCACC | CACCCGAACTAGTGAAGCTACTC | 34(G-100%);56(A-6%,G-100%);74(C-6%,G-100%);84(A-100%);86(G-100%);116(A-100%);126(C-100%,T-6%);143(A-100%);144(C-100%);149(A-37%,G-100%);194(C-100%,A-36%);197(G-24%,A-100%);200(G-17%,A-97%,T-60%);212(G-13%,A-100%);218(C-37%,T-100%);227(G-100%); | G;G;G;A;G;A;C;A;C;G;C/A;A;A/T;A;T/C;G | G;G;G;A;G;A;C;A;C;G;C/A;A;T/A/G;A;C/T;G |
| 27 | TCGTAGAGTTAAGTTCGAGCTTGAA | CTACCTCTCGACACAACATAACTCA | 36(A-100%);47(C-100%);52(T-100%);53(C-93%,G-16%);64(C-24%,T-92%);69(G-100%);73(A-88%,C-63%);84(C-100%);86(G-35%,C-99%);87(G-100%);90(T-100%);91(c-93%,T-16%);95(C-12%,t-100%);99(c-100%);117(A-100%,T-9%);118(G-99%,T-26%);119(G-99%,T-26%);130(C-100%);145(C-8%,T-92%);149(A-9%,C-97%);150(A-7%,T-93%);155(C-93%,T-17%);171(C-24%,T-92%);172(G-100%);173(G-100%);174(C-99%,T-31%);175(C-96%,T-7%);177(G-100%);179(C-13%,T-99%);180(C-100%);182(C-92%,T-42%);183(G-100%);184(G-100%);186(C-100%);187(C-100%,T-9%);188(C-100%);189(G-62%,A-88%);190(A-30%,G-99%,T-20%);191(A-100%);200(C-30%,T-92%);206(G-5%,T-100%);207(G-100%);208(C-30%,T-92%);211(C-100%);212(A-16%,C-93%);213(G-16%,A-93%);220(A-7%,G-96%);221(G-100%);222(C-100%);223(G-9%,T-100%);224(A-8%,G-99%,T-6%);225(A-7%,G-98%);227(G-100%,T-7%);233(A-34%,G-99%); | A;C;T;G;C;G;C;C;C;G;G;C;T;C;A;G;G;C;C;C;T;T;C;G;A;C;C;G;T;C;T;G;G;C;C;C;A;G;A;C;G;G;C;C;C;A;G;G;C;T;G;G;G;G | A;C;T;C;T;G;A;C;C/G;G;T;C;T;C;A;G;G;C;T;C;T;C;T;G;G;C/T;C;G;T;C;C;G;G;C;C;C;A;G;A;T;T;G;T;C;C;A;G;G;C;T;G;G;G;G |
| 28 | TCACAGGTATGAAGTGCACATTTTC | GCTTACTTCAGGGAACAGATTAGGA | 47(C-100%);48(C-100%);51(T-100%);53(A-100%);55(C-100%);62(C-100%);70(A-6%,G-100%);78(A-12%,g-100%);81(t-100%);86(a-100%);90(A-33%,c-99%);97(c-100%);100(g-100%);104(C-100%);112(T-100%);117(a-100%);120(a-100%);133(a-100%);160(A-33%,T-99%);182(A-100%);187(C-100%);193(T-100%);214(G-23%,T-100%);227(A-98%,T-51%);230(C-100%);232(G-100%); | C;C;T;A;C;C;G;G;T;A;C;C;G;C;T;A;A;A;T/A;A/T;C;T;T;T/A;C;G | C;C;T;A;C;C;G;G;T;A;C;C;G;C;T;A;A;A;T;A;C;T;T;A;C;G |
| 29 | ATGAATTTGGTTTTGAGCCAGGAAT | AAATCAGACACAAGAGCATAAACCC | 47(C-100%);50(C-100%);51(C-100%,T-21%);56(A-6%,T-100%);59(A-6%,C-13%,G-100%);65(G-25%,A-100%);71(G-100%);77(G-100%,T-30%);87(T-100%);88(C-100%);95(C-100%,T-20%);97(G-100%);100(C-100%,G-32%);108(G-100%);146(A-100%);149(C-100%);156(C-13%,A-100%);160(A-100%);179(A-100%);182(A-5%,G-100%);185(G-100%,T-5%);188(G-100%);206(A-7%,G-100%);209(C-100%);218(A-100%); | C;C;C;T;G/A;A;G;G;T;C;C;G;C;G;A;C;A;T/A;A;G;G;G;G;T/C;A | C;C;T/C;T;G;A;G;T/G;T;C;C/T;G;G/C;G;A;C;A;A;A;G;G;G;G/A;C;A |
| 30 | ACATGCTAAAGAATCCTTCCTCACT | GATGTCTGGTGGATTAGTAGCTCAT | 37(t-100%);48(c-100%);74(A-100%,t-46%);80(A-8%,G-100%);82(T-100%);84(A-22%,T-100%);95(A-57%,C-80%);96(C-100%,T-16%);115(C-100%);118(C-100%);132(g-69%,T-94%);154(G-100%);178(G-8%,C-100%);184(A-8%,T-100%);185(C-8%,G-100%);208(A-35%,G-100%);215(A-9%,G-6%,C-100%);221(C-100%,T-23%);222(C-100%);227(A-35%,C-100%);229(G-100%); | T;C;T/A;G;T;A/T;C/A;T/C;C;C;T/G;G;C;T;G;G;C;T/C;C;C;G | T;C;A;G;T;T;A;C;C;C;T;G;C;T;G;G;C;C;C;C;G |
| 31 | CACATGGTGGTTTGTGACAAGTATA | ATAAGATTTTGTAAAGTGGCGGGAG | 36(C-100%);45(C-8%,T-99%);65(T-100%);96(G-14%,A-100%);99(A-25%,G-100%);101(G-100%);107(C-97%,T-53%);109(G-97%,A-54%);117(C-100%);123(C-9%,T-100%);130(C-100%);134(C-99%,T-23%);135(A-9%,G-100%);136(G-100%,T-10%);137(A-23%,G-99%);138(C-74%,T-89%);146(A-100%,T-10%);147(G-53%,A-97%);158(C-100%);187(C-99%,T-23%);196(G-100%,T-9%);198(G-100%,T-9%);199(G-100%);206(A-53%,G-97%);215(C-88%,T-74%);216(C-100%,T-15%);217(G-100%);223(A-53%,C-94%,T-9%);231(C-100%); | C/T;T;T;A;A/G;G;C;A/G;C;C/T;C;C;A/G;G;G;T/C;A;A;C;C;G;G;G/A;G;C/T;C;G;C;C | C;T;T;A;G;G;C;G;C;T;C;C;G;G;G;T;A;A;C;C;G;G;G;G;C;C;G;C;C |
| 32 | TGCCATGCACTTACAATAATTAAACA | ATTTGTGCAGCTGAACGTCTTC | 49(G-100%);73(G-100%);104(G-100%);116(A-100%);122(A-13%,T-100%);149(A-22%,G-100%);173(C-21%,G-100%);181(A-100%,T-22%);194(C-33%,T-100%); | G;G;G;A;T;G;C/G;A;T | G;G;G;A;T;G/A;G;T/A;T/C |
| 33 | ACTTTGTAAGTTTAGGGGTGAGATA | CACAGCTTCAATTTTGTCACATCTG | 44(A-10%,c-100%);50(G-18%,C-99%);52(C-100%,T-10%);63(A-22%,T-99%);66(C-100%,T-5%);73(G-100%);78(G-100%);86(G-100%);90(A-100%);92(A-100%);98(A-17%,T-100%);105(G-100%);116(A-99%,G-22%);117(A-99%,T-19%);136(A-38%,T-97%);141(G-100%);142(C-100%,T-16%);147(C-100%);157(C-18%,G-99%);164(A-99%,T-22%);166(C-100%);167(A-100%);176(A-100%,T-6%);181(G-100%);187(A-100%);194(A-100%);198(C-9%,T-99%);199(T-100%);203(G-9%,A-100%);207(C-19%,A-99%);215(A-100%,T-9%); | C;C;C;T;C;G;G;G;A;A;T;G;A;A;T;G;C;C;G;A;C;A;A/T;G;A;A;T;T;A;A;A | C;C;C;T/A;C;G;G;G;A;A;T;G;A/G;A;A/T;G;C;C;G;T/A;C;A;A;G;A;A;T;T;A;A;A |
| 34 | AGGAAATGGCCTAGCAAAAATTGG | CTCCCAAGTTCGATTCAAACAAGAA | 35(a-100%);40(t-100%);43(a-100%);50(C-21%,g-100%);51(A-7%,g-100%);55(c-99%,T-44%);57(C-100%);60(A-8%,T-100%);89(C-100%,T-8%);91(G-6%,A-100%);93(C-100%,T-6%);96(C-100%);136(C-9%,T-100%);144(C-100%,T-12%);154(G-7%,A-100%);156(A-21%,G-100%);158(T-100%);161(T-100%);169(T-100%);188(A-100%);194(A-100%);197(A-100%);202(c-99%,T-46%);207(G-9%,a-100%); | A;T;A;G;G;C;C;T;C;C/A;G/C;C;T;C;A;G;T;T;T;A;A;A;C;A | A;T;A;G/C;G;C;C;T;C;A;C;C;T;C;A;G/A;T;T;T;A;A;A;C;A |
| 35 | CGTTTTGGAAATTTGTGCAAGGTTT | TGCCGCCAAGAATTCTAAAATTACA | 37(A-100%);93(T-100%);102(G-92%,T-78%);110(G-100%);144(T-100%);149(C-100%); | A;T;G;G;T;C | A;T;G;G;T;C |
| 36 | GAAACTCATATAATCAAAAACTCGAGATT | ACCAAGATCCGAATTCGAACTC | 44(A-18%,T-100%);48(G-100%);49(A-7%,C-100%);51(A-100%);53(A-44%,T-99%);54(C-100%,T-19%);86(A-9%,C-100%);131(T-100%);135(C-100%);145(G-100%);146(G-100%);178(A-100%);184(G-9%,C-21%,T-99%);187(G-18%,T-100%);197(C-32%,T-99%);224(A-18%,T-100%);233(A-8%,G-100%);235(C-8%,T-100%);239(A-13%,C-24%,G-100%); | T;G;C;A;A;C;C;T;C;G;G;A;C;T;T;T;G;T;G | T;G;C;A;A/T;C;C;T;C;G;G;A;C/T;T;T;T;G;T;G |
| 37 | AAAAAGAGCGATCTTGCCACCA | AAGAAAAGGAAAGGAATTCTCCCAA | 34(C-100%);66(A-100%,G-11%);81(G-100%);84(A-100%,G-11%);92(G-100%);94(G-23%,A-99%);97(A-100%);111(G-100%);118(A-100%);123(C-100%);124(A-100%);129(A-100%);133(C-100%);146(G-100%);156(G-100%);158(T-100%);188(C-100%); | C;A;G;A;G;A;A;G;G/A;C;A;A;C;G;G;T;C | C;A;G;A;G;A;A;G;A;C;A;A;C;G;G;T;C |
| 38 | AAAGCCAACTGCCAGTTTTCAAT | TGGCCTAAGTTTTATCCTATAGCTGA | 42(A-100%);46(G-100%);55(C-100%);68(A-100%);83(C-100%);102(A-100%);107(T-100%);116(G-9%,T-99%);119(G-37%,A-97%);123(T-100%);127(C-28%,T-90%);152(G-13%,C-94%,T-44%);156(G-100%);158(G-13%,A-99%);172(G-100%);182(C-89%,G-29%);183(A-100%);209(T-100%);214(A-100%);222(C-100%);224(G-90%,C-28%);226(C-18%,T-91%);232(C-100%);239(G-100%); | A;G;C;A;C;A;T;T;A/G;T;T;T/C/G;G;G/A;G;C;A;C/T;A;C;G;T;C;G | A;G;C;A;C;A;T;T;A;T;T;C;G;A;G;C;A;T;A;C;G;T;C;G |
| 39 | TGAGAAATTTTTGGAAGAGGTTGCC | TACTCCTCCGGATCAGCACTAG | 36(A-100%,C-46%);38(T-100%);46(C-26%,T-100%);49(T-100%);56(A-100%);57(C-100%);62(C-100%);68(C-100%);81(A-100%,T-8%);86(C-100%);95(A-21%,G-100%);96(A-100%);100(A-11%,G-100%);112(T-100%);116(C-100%);127(T-100%);139(A-14%,G-100%);148(C-98%,T-59%);169(T-100%);172(A-100%);177(G-100%,T-11%);180(C-100%);195(C-25%,T-100%);201(C-26%,T-100%);206(G-100%);207(A-100%);226(A-100%,G-46%);235(G-14%,T-100%);240(G-100%);243(C-94%,T-83%); | C/A;T;T;T;A;C;A/C;C;A;C;G;A;G;T;C;T;G;C;T;A;G;C;T;T;A/G;A;G/A;T;G;T/C | C/A;T;C/T;T;A;C;C;C;A;C;G;T/A;G;T;C;T;A/G;C;T;A;G;C;C/T;T/C;G;A;G/A;T/G;G;T/C |
| 40 | TTGGGCTTCCTGGAATTGTCTTTTT | AAAAGCAGCAGAATGCAGATTTCT | 38(T-100%);42(A-100%,G-9%);47(A-8%,C-100%);54(A-100%);80(G-28%,A-100%);102(A-100%);108(A-100%);114(C-9%,T-100%);132(G-100%);146(C-100%);176(T-100%);186(T-100%);191(A-14%,G-100%);192(A-89%,G-88%);194(T-100%);195(C-100%);199(G-100%,A-9%);200(G-100%);202(A-100%,C-9%);216(T-100%);224(C-100%);225(T-100%); | T;A;C;A;A;A;A;T;G;C;T;T;G;A/G;T;C;G;G/A;A;T;C;T | T;A;A/C;A;G/A;A;A;T;G;C;T;T;G;G/A;T/C;C;G;G;A;T;C;T |
| 41 | CGACCCATGAAACATGAACATTGAA | CTTCCATGGATGCCATTAAGGAAC | 37(A-100%);39(C-100%);41(G-100%);54(A-100%);67(G-16%,T-100%);79(T-100%);82(C-100%);86(G-6%,A-100%);92(T-100%);95(T-100%);134(A-100%);160(T-100%);161(C-18%,G-100%);166(G-93%,A-83%);181(G-16%,A-100%);193(T-100%);195(G-9%,T-100%);196(G-100%);197(C-100%);204(c-100%,T-24%);207(c-100%);219(c-100%);226(G-10%,A-100%);227(G-64%,T-97%);235(T-100%);236(C-99%,A-43%); | A;C;G;A;T;T;C;A;T;T;A;T;G;A;A;T;T;G;C;C;C;C;G/A;T;T;A/C | A;C;G;A;T;T;C;A;T;T;A;T;G/C;A/G;A;T;T;G;C;C/T;C;C;A;T;T;A/C |
| 42 | TTATAGACTCGATGACTTTGGACGC | ATTCCATGAAATGCGTCCCTAAATC | 41(C-7%,t-100%);49(A-6%,G-100%);52(G-100%);60(G-99%,T-22%);80(C-9%,T-100%);82(T-100%);109(C-100%,T-9%);141(C-38%,T-99%);144(A-22%,G-99%);173(G-9%,C-100%);184(C-39%,T-100%);188(G-100%,A-9%);190(A-100%,g-15%);223(A-22%,G-99%);227(C-100%);237(G-100%,T-8%); | T;A/G;G;G;T;T;C;T;G;C;T;G;A;G;C;G | T;G;G;T/G;T;T;C;T/C;G/A;G/C;T;G;A;G/A;C;G |
| 43 | TGATTTCACCTTGGCTAACGATTG | ATCTTAACATTCAAGAAAATAACCTTCAAT | 44(C-99%,T-23%);72(G-6%,A-100%);84(A-100%);124(C-100%);158(G-100%);198(A-23%,T-99%);201(T-100%);222(C-100%); | C;A;A;C;G;T;T;C | C;A;A;C;G;T;T;C |
| 44 | GATAATGTGAGCACAACTGGAAAGG | AGCTTTTAGTTCTTTTGAATTCATGCA | 46(G-100%);130(G-100%);139(T-100%);142(C-100%);151(G-100%);191(C-100%); | G;G;T;C;G;C | G;G;T;C;G;C |
| 45 | GTTTCGGGTTGTGCTGAGTGAAAG | GGCACTTCATCATCATCAAAATCCT | 38(A-100%);40(C-12%,T-100%);41(C-100%);42(T-100%);68(G-100%);75(G-20%,A-100%);77(C-100%,T-20%);80(C-94%,T-81%);90(A-7%,G-100%);95(T-100%);99(A-100%);110(A-14%,G-100%);114(A-7%,C-100%);115(A-100%,T-12%);118(C-20%,G-100%);121(C-94%,T-81%);122(G-20%,A-100%);129(A-6%,G-100%);132(C-20%,T-100%);144(C-100%);190(A-20%,C-100%); | A;T;C;T;G;A;C;C;G;T;A/G;A/G;C;A;G;C;A;G;T;C;C | A;T;C;T;G;G/A;C/T;T/C;A/G;T;A;G;C;A/T;G/C;T/C;G/A;G;C/T;C;A/C |
| 46 | CAGACAGAATAAGAGTGCATCACTT | CGATGTAGAGTTCCTGAAGGACAA | 40(G-100%);50(A-21%,T-100%);52(A-100%,T-12%);61(A-100%);65(T-100%);80(G-100%,T-12%);131(G-100%);144(T-100%);146(G-15%,A-100%);161(G-6%,C-100%);176(G-100%,T-20%);196(G-100%);199(C-100%);207(C-100%);208(T-100%);209(A-62%,G-99%);218(A-49%,G-100%);230(A-100%,T-21%); | G;T;A;A;T;G;G;T;A;C;G;G;C;C;T;A/G;G;A | G;T/A;A;A;T;G;G;T;A;C;T/G;G;C;C;T;G;G;A/T |
| 47 | TCCAATTAGAAAGTGCTGGGAAAAA | GAGTTGTTCCATGTGGTTACTGTTT | 37(G-100%,c-14%);49(A-100%,T-8%);50(T-100%);81(T-100%);84(C-99%,T-15%);89(A-100%);90(C-25%,A-99%);92(G-13%,A-100%);96(C-10%,G-100%);102(G-100%);106(G-34%,A-99%);110(C-5%,T-100%);122(C-100%);123(A-100%);137(C-13%,A-100%);142(C-100%);155(T-100%);166(G-100%,C-25%);175(A-98%,T-35%);201(G-5%,A-100%);227(A-99%,T-29%); | G;A;T;T;C;A;A;A;G;G;G/A;T;C;A;A;C;T;G;A;A;A | G;A;T;T;C;A;A;A;G;G;A;T;C;A;A;C;T;G;A;A;A |
| 48 | AGGCGTTTCTCTGATTGAAATTACA | ATGGAATGCATTTGATCCCCATTTC | 38(A-100%);43(C-100%);66(T-100%);93(A-8%,G-100%);98(A-99%);112(C-100%,T-8%); | A;C;A;G;A;C | A;C;T;G;A;C |
| 49 | TGGCTGAACCTTTAGCATTATTGTT | CCTGGAACAAAAGCAAGATGTAGTT | 36(C-29%,G-6%,A-100%);41(C-10%,T-100%);42(C-40%,T-99%);43(A-100%);46(A-100%);49(G-13%,A-98%);60(T-100%);64(C-100%);66(T-100%);74(C-100%);79(T-100%);83(C-100%);93(C-100%);105(C-100%,T-8%);125(A-37%,G-98%);148(G-100%,A-10%);151(A-100%);154(C-100%);156(g-100%);197(C-100%);200(A-100%);204(C-99%,G-11%,T-28%);218(G-100%);219(A-28%,G-100%); | A;T;T/C;A;A;A;T;C;T;C/G;T;C;C;C;G;G;A;C;G;T/C;A;G/C;G;G | A;T;T;A;A;A;T;C;T;C;T;C;C;C;G;G;A;C;G;C;A;C;G;G |
| 50 | ACATCCTTGACTTGGGAGAATAATTTC | AATTCTCAGCGGGCCAATTCAATC | 42(C-6%,T-100%);66(C-100%);68(G-11%,A-100%);71(G-100%);72(C-12%,T-100%);75(C-100%,T-23%);87(T-100%);93(A-100%);111(T-100%);117(C-100%);132(G-100%);159(A-6%,G-100%);188(C-100%);191(C-100%,T-14%);213(A-30%,C-99%);225(C-51%,T-99%);227(G-23%,A-100%);229(G-10%,A-100%);237(A-6%,T-100%); | T;C;A;G;T;C;T;A;T;C;G;G;C;C;C;T;A;A;T | T;C;G/A;G;T;T/C;T;A;T;C;G;G;C;C;C;C/T;G/A;A;T |
| 51 | CTTTGAAGACCCTGAAAGCTTGATT | CTCAGAGAGGGCCAATGCAC | 48(A-12%,G-100%);52(T-100%);70(G-95%,A-43%);79(C-100%);111(G-8%,A-100%);138(G-100%);145(C-100%,T-21%);152(A-95%,C-43%);157(A-11%,G-100%);162(G-100%);177(C-100%);178(T-100%);195(A-100%);205(A-8%,T-100%);208(C-100%);210(G-100%);211(G-38%,T-100%);226(C-100%);229(C-100%,T-48%); | G;T;A;C;A;G;C;C;G;G;C;T;A;T;C;G;T;C;C | G;T;G/A;C;G/A;G;C;A/C;G;G;C;T;A;T/A;C;G;T;C;C/T |
| 52 | ATAGACTCTTAAGGCCTGGAGGATA | AAAAACAGGTTAACAAGAGCATAGT | 46(G-99%);47(G-99%);57(C-5%,A-100%);96(A-14%,C-100%);104(T-100%);113(T-100%);119(C-100%,T-6%);156(A-100%);194(A-5%,G-100%);199(G-100%);206(A-100%);214(A-100%); | G;G;A;C;T;T;C;A;G;G;A;A | G;G;A;C;T;T;C;A;G;G;A;A |
| 53 | TGGTTAAGAAAATGTTCAGGGTGTC | TTTCAGTACATTCTTCCTTCCCCTT | 38(A-16%,G-100%);44(C-100%);47(C-100%,T-30%);48(G-100%);50(G-100%);56(C-95%,G-78%);59(C-17%,A-100%);69(C-12%,T-100%);76(G-6%,A-100%);80(A-6%,G-100%);84(G-100%);110(G-100%);113(G-100%);116(C-11%,G-100%);131(A-100%);152(T-100%);177(G-100%,A-26%);178(G-100%);194(C-86%,G-89%);196(C-100%); | G;C;C;G;G;C/G;A;T;A;G;G;G;G;G;A;T;G;G;C/G;C | G;C;C;G;G;G;A;T;A;G;G;G;G;G;A;T;G/A;G;C/G;C |
| 54 | CTGTCTGTCAAAGAACTCGAGAAAC | ACTTCATTGCCAGCCCCTC | 42(C-99%,T-7%);43(T-100%);44(C-99%,T-7%);49(C-100%);54(A-100%);71(A-100%);72(C-100%,T-15%);74(A-15%,G-100%);78(C-100%,T-16%);88(T-100%);93(A-100%);95(G-100%);99(C-100%,T-14%);105(G-16%,T-100%);118(C-100%);123(G-100%);124(T-99%);135(C-100%);141(C-100%);144(C-100%);154(C-100%);155(G-100%);175(G-100%);176(T-100%);177(C-100%);189(C-97%,T-16%);192(C-10%,T-100%);202(A-100%);207(C-100%,T-15%);209(G-100%); | C;T;C;C;A;A;C;G;C;T;A;G;C;T;C;G;C;C;C;C;C;G;G;T;C;C;T;A;C;G | T/C;T;T/C;C;A;A;C/T;A/G;T/C;T;A;G;C;G/T;C;G;T;C;C;C;C;G;G;T;C;C;T;A;C/T;A/G |
| 55 | TGGACAAATCAGTGTTCCTAAGAAG | TGAATTCAATCCTAACAAAGCTCTCA | 42(G-100%);43(T-100%);48(T-100%);61(C-100%);70(C-62%,A-96%);84(G-7%,T-100%);90(C-7%,G-100%);98(G-20%,A-100%);99(C-17%,T-100%);113(T-100%);139(C-56%,T-98%);170(C-9%,T-100%);236(T-100%); | G;T/C;T;C;A;T;G;A;T/C;T;T/C;T;T | G;T;T;C;C/A;T;G;A/G;T;T;C/T;T;T |
| 56 | TTTCAATGAAAACAACAAATGGCAC | ACTTAATTCTGATGAAATTTAATTTTTAGTGTC | 43(G-95%,T-11%);56(G-31%,A-88%);60(G-15%,A-100%);174(A-78%,C-67%);175(G-99%);180(C-100%,T-7%);200(A-80%,G-55%);201(G-31%,C-88%); | G;A;A;A;G;C;A;C | G;A;A;A;G;C;A;C |
| 57 | AGCAAAAGAAATGTTCAATGTCAACA | TCTTATTTCATTTTTATTTACCCTCAACAA | 51(c-100%);52(A-7%,C-8%,t-100%);87(T-100%);92(C-100%,T-14%);105(A-19%,T-100%);107(C-100%,T-8%);129(A-19%,G-100%);152(g-100%,T-25%);212(T-100%);229(G-100%); | C;T;T;C/T;T;C;G;G;T;G | C;T;T;C;A/T;C;G/A;G;T;G |
| 58 | AAGTACAAACAAGCTGCACATCAAT | GATTCATTGCCTGGATTTTTCAACC | 50(t-100%);51(G-41%,a-98%);54(A-100%,T-16%);57(C-13%,T-100%);64(A-100%);89(C-100%);96(A-100%);138(C-100%);155(G-100%);178(T-100%);189(C-100%);196(G-100%);207(C-77%,T-76%);222(C-95%,T-47%);228(A-100%);237(C-95%,T-47%); | T;G/A;A;T;A;C;A;C;G;T;C;G/A;T/C;C;A;C | T;A/G;A/C;A/T/C;A;A/C;A/G;C/A;G;T/C;C/T;G;T;C;T/A;C |
| 59 | GAGGTGAGGTAAGCGACACC | CCAGACTCAGCTATAACCCACAC | 34(G-100%,T-24%);35(C-35%,T-100%);56(A-98%,G-28%);60(G-100%);61(G-100%);66(G-100%);72(A-19%,G-100%);89(C-100%,T-7%);90(G-5%,C-100%);92(G-100%);96(G-100%);102(G-100%,T-9%);104(A-8%,C-100%);105(G-100%);122(C-100%);126(A-13%,G-100%);132(A-44%,G-100%);140(T-100%);141(G-100%);146(G-100%);155(A-9%,G-100%);156(G-100%,T-29%);171(T-100%);180(C-9%,T-100%);184(G-100%);192(C-7%,G-99%);199(A-90%,T-79%);204(G-100%);205(A-100%);207(A-100%,T-12%);209(G-97%,T-65%);218(G-12%,A-100%);225(A-100%);228(T-100%);231(C-77%,A-92%); | G;T;A;G;G;G;G;C;C;G;G;G;C;G;C;G;A/G;T;G;G;G;T/G;T;T;G;G;A/T;G;A;A;G/T;A;A;T;C/A | G;T;G;G;G;G/A;G;C;C;G;G/A;G;C;G;C;G;G;T/C;G;G;G;G;T;T;G;C/G;A;G;A;T/A;G;A/G;A;C/T;A |
| 60 | CTTCCATAGCCAAGCTTACCGTC | AATCAAATGGATTCGCATTCCTCC | 38(G-100%);50(A-100%);86(G-100%);89(A-21%,C-99%);91(A-14%,G-100%);99(A-19%,G-100%);112(G-44%,C-95%);114(G-100%,C-11%);115(C-100%,A-11%);121(C-100%);125(A-100%);134(A-10%,G-100%);140(A-8%,C-100%);141(A-21%,G-100%);151(C-76%,T-89%);152(A-19%,G-100%);164(A-100%);170(C-100%);175(C-24%,T-98%);178(C-100%);180(A-56%,G-94%);188(A-34%,G-99%);191(G-90%,T-68%);200(G-100%);204(G-100%);218(A-56%,G-94%);224(G-7%,C-100%);228(G-100%); | G;A;G;C;G;G;C;G;C;C;A;G;C;A/G;T;G;A;C;T;C;G;G;G;G;G;G;C;G | G;A;G;C;G;G;G/C;G/C;A/C;C;A;G/A;C;G;C;G;A;C;T/C;C;G/A;G;T;G;G;A/G;C;G |
| 61 | GCAGGGTAATTACTCAGCAGAGAAT | ACTACAAACACCATAAGCTTGATGA | 40(A-14%,G-100%);53(T-100%);73(A-100%);97(G-15%,A-100%);103(A-100%);106(G-100%);108(T-100%);113(G-100%);114(C-100%);162(A-100%,T-12%);170(T-100%);177(C-22%,T-100%);179(C-100%,T-35%);187(G-14%,C-100%);192(G-97%,T-68%);193(A-12%,G-100%);198(C-100%);199(G-100%);204(A-100%);205(C-100%,T-16%);211(G-6%,A-100%);220(A-100%);223(G-100%,T-10%);226(G-100%,T-12%);229(C-12%,A-100%); | G;T;A;A;A;G;T/G;G;C;A;T;C/T;C/T;C;G/T;G;C;G;A;C;A;A;G;G;A | G/A;T;A;G/A;A;G;A/T;G;C;T/A;T;T;T/C;C;G;A/G;C;G;A;C;A;T/A;G/T;G;A/C |
| 62 | AGGGCTGGAAAACTCTATAAAGCTA | GCAACATGATCGGATTTGAATTCCA | 57(A-100%);81(T-100%);84(A-100%);90(G-100%);102(T-100%);103(G-100%);114(A-9%,T-100%);123(T-100%);135(T-100%);147(C-100%);195(T-100%);207(C-13%,T-99%);228(C-13%,T-100%);237(T-100%);238(A-100%);239(G-100%); | A;T;A;C/G;T;G;A/T;T;T;C;T;T;T;T;A;G | A;T;A;G;T;G;T;T;T;C;T;T;T;T;A;G |
| 63 | CTTATGAGCTATGCTGAGAACATGC | TAGTGACTCCGGTGATTAAGAGTTC | 40(T-100%);44(C-100%,T-7%);47(A-100%);54(T-100%);72(A-42%,T-99%);73(A-99%);93(G-99%);94(G-100%,T-6%);95(G-100%,T-6%);96(C-99%);102(G-100%);111(C-99%);112(G-62%,T-90%);115(A-62%,T-89%);118(C-89%,T-63%);149(A-100%);151(G-99%);154(A-100%);156(G-99%);159(C-27%,T-98%);160(G-99%);162(G-99%,T-37%);175(A-91%,G-61%);176(A-6%,C-100%);181(G-99%);187(G-100%);203(A-99%);206(G-99%); | T;C;A/T;T;T;A;G;G;G;T/C;G;C;T;T/A;C;A;G/A;A;G;C/T;G;G;A/G;C;G;A/G;A;G | T;C;A;T;T;A;G;G;G;C;G;T/C;G/T;T/A;T/C;A;G;A;G;T;G;G;A/G;C;G;G;A;T/G |
| 64 | GTGAAGAAAAAGGTTTGCAAAACGT | AGGCCCATCTAATCTAGAAACTAGA | 85(t-99%);88(a-97%,T-13%);117(A-100%);150(G-31%,A-94%);165(C-8%,A-99%);192(C-90%,G-11%,T-29%);195(A-99%,T-8%);205(C-14%,T-98%);208(C-100%);216(G-100%); | G;A;A;A;A;C;A;T;C;G | T;A;A;A;A;C;A;T;C;G |
| 65 | TGTGGTTTATATGAGTTTATTGGTCCG | CGAAAATCGAATTCCTGTAGAAATTGT | 38(G-9%,A-99%);39(T-100%);40(C-100%);41(C-100%);48(C-100%);50(C-12%,T-100%);51(G-100%);52(C-100%);104(C-100%);119(G-6%,T-100%);122(A-100%);125(A-34%,G-100%);128(A-100%);149(A-100%,T-16%);155(C-87%,T-74%);167(C-100%,T-6%);194(C-100%); | A;T;C;C;C;T;G;C;C;T;A;G;A;A;C/T;C;C | A;T;C;C;C;T/C;G;C;C;T;A;G;A;A/T;C;C/T;C |
| 66 | CTGATGCTGTCACATTCCATCTTC | ATCATCAACGCACCTGCCATTAG | 39(A-49%,T-99%);40(A-100%);41(C-5%,A-100%);43(C-11%,T-100%);44(C-6%,T-100%);45(G-100%,T-6%);46(G-6%,A-100%);47(A-14%,G-100%);48(A-100%,T-14%);61(C-100%);73(C-19%,A-100%,T-9%);74(A-6%,T-100%);86(C-100%,T-8%);91(C-100%);96(G-17%,A-100%);104(A-100%);111(T-100%);135(C-100%,A-17%,T-17%);159(T-100%);168(G-100%);171(G-100%);177(G-100%,T-17%);180(C-100%,T-15%);186(C-100%);189(C-100%);198(G-100%);201(G-100%); | T/A;A;A;T;T;G;A;G;A;C;A;T;C;C;A;A;T;C;T;G;G;G/T;C;C;C;G;G | T/A;A;A;C/T;T;G/ICTCC;A;A/G;A/T;C;A/T/C;A/T;C/T;C;A;A;T;C/T/A;T/C;G;G/T;G;C;C;C;G;G |
| 67 | ACCTTATCATAAATTTTGAAAATTGCTCTGA | GTCAAGAACCGAGCTTTGAATTCAT | 127(C-100%,T-6%);136(G-16%,T-100%);181(G-17%,T-100%);196(A-100%); | T/C;T;G/T;A | C;C/T;T;A |
| 68 | TAGGAGTTAAGGAGTCATTTGCACA | GATTCTCCCTGCAAGCCCTTTTT | 47(G-93%,t-15%);55(C-25%,T-83%);57(C-100%);61(G-12%,A-95%);62(G-97%,T-6%);63(G-100%);72(A-100%);73(C-98%);74(A-10%,G-91%);83(C-25%,T-83%);89(T-100%);114(A-25%,T-83%);119(C-10%,T-91%);121(C-100%);124(C-93%,T-15%);129(C-8%,T-96%);148(A-99%);154(T-99%);155(C-91%,T-20%);157(G-99%);158(C-25%,T-83%);159(A-100%);160(G-93%,A-15%);161(C-93%,T-15%);164(G-95%,T-8%);165(A-93%,G-15%);186(G-100%);191(A-99%);192(A-96%,T-8%);198(G-100%);201(A-93%,G-15%);202(C-99%);203(C-15%,T-93%);217(C-92%,T-16%);221(A-8%,T-96%);222(A-10%,G-91%);225(A-100%); | T;C;C;A;G;G;A;T;G;C;T;A;T;C;T;T;A;T;C;G;C;A;A;T;T;G;G;A;A;G;G;C;C;T;T;G;A | T;C;C;A;G;G;A;C;G;C;T;A;T;C;T;C;A;T;C;G;C;A;A;T;G;G;G;A;T;G;G;C;C;T;A;G;A |
| 69 | GCAAACAGTCACAGGTAAGAGTTTC | CTCATTGAAGCTGTGTTGTGTCATA | 63(G-15%,a-100%);65(A-8%,t-100%);72(t-100%);86(C-100%,T-26%);104(C-100%,T-15%);164(C-15%,T-100%);177(C-100%);194(G-100%);222(A-15%,G-100%);230(C-100%,T-13%); | A;T;T;C;C;T;C;G;G;C | A;T;T;C;C;T;C;G;G;C/T |
| 70 | TTTTCTTATGGCATGTACAGGAACT | GTGCTATCAGTTCGTGTAATATGCA | 37(A-100%);58(G-9%,T-100%);61(A-100%);79(G-99%,A-34%);82(A-14%,T-100%);97(T-100%);148(A-100%,T-5%);163(A-100%);176(G-17%,A-100%);187(G-5%,T-100%);206(G-18%,a-100%);214(G-5%,c-100%); | A;G/T;A;A/G;A/T;T/A;A;A;A;T;A;C | A;T;A;G;T;T;A;A;A;T;A;C |
| 71 | GTGCTCTTAAGTGCTGGTGATAAAA | TATTTTCATAGCAAAAGCCAGAGCA | 36(A-100%,g-15%);40(T-100%);43(T-100%);44(A-100%);48(C-99%,T-12%);84(G-100%);86(G-100%);114(t-100%);131(A-100%,c-15%);134(c-100%);136(C-10%,T-99%);160(A-100%);161(T-100%);183(G-25%,T-98%);189(T-100%);193(G-100%);199(A-84%,G-78%);200(T-100%);202(C-100%);223(C-100%); | A;T;T;A;C/T;G;T/G;T;A;C;T;A;T;G/T;T;G;G/A;T;C;C | A;T;T;A;C;G;G;T/C;A;C;T;G/A;C/T;T/G;T/G;G;G;C/T;C;C/T |
| 72 | TATCAACTACAGGAAACTCACCGT | AAAATGGACAAACTAGCTAGAAGAG | 42(G-99%);66(A-5%,G-100%,C-19%);72(A-100%);75(A-100%);93(C-41%,T-97%);102(G-100%);114(G-100%);123(C-100%);135(A-99%);157(G-100%);171(G-12%,A-100%);174(C-99%);198(A-97%,T-39%);222(A-100%);224(T-100%);231(A-100%); | G;G;A;A;T;G;G;C;A;G;A;C;A;A;T;A | A/G;G;A;A;C/T;G;G;C;G/A;G;A;T/C;T/A;A;T;A |
| 73 | AAGTTAAGCATGAGAGTGGTTAGGT | TGGAACCTATGGTGAAGATTTTCAT | 63(C-25%,T-96%);87(T-100%);110(g-100%);115(c-25%,T-96%);126(G-85%,T-65%);131(A-100%);149(T-100%);152(C-100%);155(G-14%,A-98%);157(G-99%);162(A-96%,C-24%);173(T-100%);192(A-96%,C-25%);200(C-100%);213(G-96%,a-25%);221(c-100%);237(a-100%);238(g-100%); | T;T;G;T;G;A;T;C;A;G;A;T;A;C;G;C;A;G | T;T;G;T;G/T;A;T;C;A;G;A;T;A;C;G;C;A;G |
| 74 | CGTTCACCGAGCGTAGTGG | GTCGAAGCTCTTCCTTAGAAACATG | 54(A-100%);55(C-100%);57(G-16%,A-100%);70(C-100%);78(C-100%);88(G-100%,T-7%);93(G-99%,C-38%);104(C-100%,T-14%);105(C-100%);117(A-18%,G-100%);118(T-100%);120(G-100%);128(A-100%);136(A-100%);138(A-20%,T-100%);139(C-100%);140(C-100%);143(T-100%);145(C-100%);150(G-100%);156(C-100%);157(G-100%);163(G-100%);167(T-100%);168(C-100%);182(A-100%);190(C-100%);192(A-6%,G-100%);194(T-100%);197(G-6%,T-100%);207(A-100%,T-6%);208(A-100%);209(C-100%);212(C-100%);217(A-62%,C-94%);219(C-100%);222(A-13%,C-36%,T-97%);224(G-100%);225(T-100%);228(G-100%); | A;C;A;C;C;G;C/G;C;C;G;T;G;A;A;T;C;C;T;C;G;C;G;G;T;C;A;C;G;T;T;A;A;C;C;C;C;T/C;G;T;G | A;C;A;C;C;G;C/G;C;C;G;T;G;A;A;T;C;C;T;C;G;C;G;G;T;C;A;C;G;T;T;A;A;C;C;C;C;T/C;G;T;G |
| 75 | TGAGGAGGCAAAATTGATAAGAGAA | GAGTAGCACTCACTTCCATCATGG | 36(A-17%,C-100%);61(C-100%,T-9%);64(A-100%);65(G-100%);69(G-99%);73(A-100%);76(C-100%,T-14%);79(G-100%);94(G-100%,T-36%);129(C-100%,T-8%);132(C-100%);133(A-100%);134(T-100%);147(C-100%,T-6%);196(T-100%);198(G-100%,C-29%,T-23%);200(A-72%,C-13%,T-94%);201(C-23%,A-100%);208(G-100%);228(A-11%,G-100%); | C;C;A;G;G;A;C;G;T/G;C;C;A;T;C;T;C/G;T;A;G;G | A/C;C;A;G;G;A;T/C;G;T/G;C;C;A;T;C/T;T;C/T/G;T/A;A/C;G;G/A |
| 76 | GCAGGATTTGGTAGGGATATCGT | AGCCATCCATGTTTACAATATGAACT | 34(A-100%,T-8%);63(G-14%,A-100%);67(G-100%);68(C-7%,T-100%);76(G-99%,T-5%);82(A-100%,T-6%);97(A-100%);105(T-100%);118(C-100%);130(A-100%);132(A-9%,C-100%);133(T-100%);134(A-100%);144(A-5%,G-100%);157(T-100%);168(G-5%,A-100%);171(g-100%);185(a-100%);192(G-100%);193(G-19%,A-97%);195(C-6%,G-100%);209(A-100%,T-12%);217(G-100%);218(G-5%,A-100%);220(C-8%,T-100%);222(G-100%);227(T-100%);237(C-100%,T-6%); | A;A;G;T;G;A;A;T;C;A;C;T;A;G;T;A;G;A;G;A;G;A;G;A;T;G;T;C | A;A;G;T;G/T;A;A;T;C;A;C;T;A;G;T;A;G;A;G;A;G;A;G;A;T;G;T;C |
| 77 | GGAGAAGATAGAAAAGCTCACCCTT | TCCTCATCTGGAATCAATGGAAACT | 52(C-10%,A-100%);55(G-100%);58(A-100%);61(T-100%);81(T-100%);85(A-18%,C-100%);87(T-100%);88(C-9%,A-100%);91(C-6%,G-100%);102(G-100%,A-40%);108(A-100%);121(G-100%);122(T-100%);143(G-100%);144(A-100%);151(A-100%);166(G-100%);169(A-100%,C-16%);178(A-100%);193(T-100%);194(C-100%);205(G-7%,C-100%);206(G-27%,T-100%);210(C-16%,T-100%); | A;G;A;T;T;C;T;A;G;G/A;A;A/G;T;G;A;A;G;A/C;A;T;C;C;T;C/T | A/C;G;A;T;T;C;T;A/C;G;G/A;A;G;T;G;A;A;G;A;A;T;C;C;T;T |
| 78 | GTCGTTTGGGGTTGACACCT | TCCACATCAAAACTGTGTTGAATCC | 38(A-48%,C-98%);47(g-100%);52(t-100%);53(a-100%);56(t-100%);58(g-100%);60(c-100%);61(T-100%);90(A-8%,T-100%);92(G-60%,T-97%);93(T-100%);108(G-94%,T-79%);117(G-53%,a-98%);133(G-100%);136(G-100%);137(T-100%);139(C-100%);141(T-100%);146(T-100%);149(A-10%,G-100%);150(A-12%,T-100%);159(G-100%);163(G-100%,T-9%);166(A-100%);167(T-100%);172(G-100%);178(G-100%);205(A-48%,T-98%);210(G-100%);213(A-100%);214(G-100%,A-21%);216(C-21%,G-99%);218(G-21%,A-99%);221(C-13%,T-100%);222(C-58%,T-97%);223(A-100%);225(T-100%); | C;G;T;A;T;G;C;T;T;G/T;T;T/G;A;G;G;T;C;T;T;G;A/T;G;G;A;T;G;G;T;G;A;A/G;G;A;T;T/C;A;T | C/A;G;T;A;T;G;C;T;T;G;T;G;A;G;G;T;C;T;T;G;T;G;G;A;T;G;G;T/A;G;A;A/G;G/C;A/G;T;C;A;T |
| 79 | AGCTTTAAAGAATGAGATGTGAGTT | ATGTTGCTGCTAGTGTTAATTTCGT | 47(C-100%);49(A-100%);57(T-100%);70(A-87%,T-94%);73(T-100%);75(T-100%);78(G-17%,C-100%);94(T-100%);100(A-61%,T-100%);125(C-100%);130(C-100%);139(C-100%);153(C-100%);163(T-100%);168(G-99%,T-46%);181(G-17%,A-100%);193(G-100%);218(C-100%,a-40%); | C;A;T;T/A;T;T;C;T;A/T;C;C;C;C;T;G;A;G/T;C | C;A;T;T/A;T;T;C;T;T/A;C;C;C;C;T;G;G/A;G;C |
| 80 | GGTACGCTGCATAAGACTAAGGATA | TGCATTTGTAACTGTAGACGCATTG | 36(A-100%);45(c-100%);66(G-100%);75(G-100%);78(C-100%);108(C-100%,T-8%);111(C-35%,T-97%);117(t-100%);138(G-100%);146(G-100%);147(A-100%);159(G-97%,A-35%);178(C-100%);183(A-5%,G-100%);187(G-100%);190(A-96%,C-51%);192(A-100%);201(C-100%);210(A-100%);211(A-100%); | A;C;G;G;C;C;T/C;T;G;G/A;A;G/A;C;G;G;C/A;A;C;A;A | A;C;G;G;C;C;T;T;G;G;A;G;C;G;G;A;A;C;A;A |
| 81 | AAGATCAAAACTATCTTGTAAGAGGAC | ATAATGTCACTTGAATGGGAATGCC | 49(T-100%);96(G-11%,A-100%);102(A-100%);108(T-100%);120(C-9%,T-100%);133(G-100%);135(G-100%,T-6%);140(G-99%,a-50%);166(A-24%,t-100%);170(C-19%,t-100%);177(T-100%);180(C-100%,T-10%);181(C-6%,A-100%);201(a-100%,T-9%);203(a-100%);204(a-100%);211(G-19%,A-100%); | T;A;A;T;T;G;G;G;T;T;T;C;A;A;A;A;A | T;A;A;T;T;G;G;G/A;T;T/C;T;C;A;A;A;A;A/G |
| 82 | ACCTTGAATTGATCCAGCAGTTAAC | CAGGATCAAAGAAGAGTGGGATTTG | 36(A-100%);39(G-100%);43(T-100%);46(G-27%,A-100%);49(C-100%);52(G-28%,A-100%);67(A-100%);70(T-100%);72(T-100%);76(G-100%);79(A-33%,T-100%);82(A-100%);127(G-100%);141(A-100%,T-29%);163(G-100%);172(G-29%,A-100%);204(C-34%,T-100%); | A;G;T;A;C;A;A;T;T;G;T;A;G;A;G;A;T | A;G;T;A;C;A;A/C;T;T;G;T;A;G;T/A;G;A/G;T |
| 83 | TGGTGAAGAACTGATTGTTAGGGAA | TAGGTGAGTTCTTGGTAAGTAAGGG | 41(g-100%);42(G-61%,a-57%);50(a-100%);51(G-98%);56(A-68%,g-44%);61(t-100%);81(c-100%);84(A-6%,t-99%);88(t-100%);94(a-100%);95(A-5%,g-100%);96(a-100%);99(A-97%,T-18%);100(C-97%,T-12%);102(G-100%);106(G-68%,A-44%);116(A-68%,T-44%);119(C-98%);120(C-99%);137(A-100%);140(C-5%,A-100%);141(G-100%);142(A-100%);144(C-100%);145(A-7%,G-100%);154(C-68%,T-51%);155(C-6%,T-100%);166(A-99%);167(C-61%,T-57%);170(C-100%,T-7%);194(C-100%);195(G-100%);202(C-100%);203(C-100%);216(G-5%,A-100%);218(T-100%);221(C-100%);223(A-23%,G-100%); | G;G;A;G;A;T;C;T;T;G/A;G;A;A;C;G;G;A;C;C;A;A;G;A;C;G/A;T/C;T;A;C;C;C;G;C;C;A;T;C;G | G;A;A;G;G/A;T;C;A/T;T;A;G;A;A/T;C/T;G;G/A;A/T;C;C;A;T/A;G;A;C;G;C/T;T;A/G;T;C;C;G;C;C;A;T;C;G |
| 84 | AAGTTGTTATATTATTATTCCGTAGAAATTAATTTT | AAACAACACCAAAGAAAGTGCCA | 56(A-11%,T-99%);132(G-8%,T-100%);139(C-100%);169(C-8%,T-100%);172(A-5%,G-100%);188(A-7%,T-100%);232(G-90%,T-69%); | T;T;C;T;G;T;G/T | T;T;C;T;G;T;T |
| 85 | ATTTGGTAAATCCGAAGAGAGGGAA | CGCCTACATCACTGCTCTCTC | 40(C-100%,T-10%);41(G-100%);42(G-7%,A-100%);43(A-99%);44(C-99%);45(A-100%);49(A-9%,G-100%);51(A-96%,C-18%);68(T-100%);77(A-93%,T-44%);83(C-96%,T-18%);99(G-100%);100(A-7%,G-100%);106(C-73%,G-87%);113(G-100%);115(T-100%);120(A-96%,T-21%);133(C-100%);139(A-27%,C-98%);140(A-32%,C-97%);147(G-30%,C-97%);156(T-100%);162(T-100%);176(A-98%);177(G-100%);179(T-100%);188(A-5%,G-100%);196(G-26%,C-97%);203(G-18%,T-96%);204(C-100%);206(C-100%);208(A-100%);212(T-100%);228(A-96%,G-11%);230(G-100%); | C;G;A;A;C;A;G;C;T;T;T;G;G;G;G;T;T;C;C;C;C;T;T;A;G;T;G;C;G;C;C;A;T;G;G | C;G;A;A;C;A;G;A;T;A;C;G;G;C;G;T;A;C;C;C;C;T;T;A;G;T;G;C;T;C;C;A;T;A;G |
| 86 | ACAAAACTGAAAAGAGAAAAACTGCA | GCAGCAACAGAACATAACCCTAATC | 39(A-7%,g-100%);47(G-100%);48(A-8%,C-100%);49(A-15%,G-99%);60(A-29%,G-98%);75(A-100%);78(A-8%,G-100%);80(C-100%);81(G-100%);96(C-100%);103(G-100%);105(G-100%);114(G-100%);120(G-7%,A-100%);123(G-100%);125(G-11%,C-100%);126(G-100%);134(C-100%);136(C-100%);137(A-100%);140(C-100%,T-7%);142(C-100%,T-7%);150(C-100%);151(G-100%);152(G-100%);153(C-100%,T-7%);160(C-100%);163(G-100%);165(A-100%);170(A-100%);171(G-100%);173(C-100%);174(A-100%);177(T-100%);182(T-100%);186(G-97%,T-37%);192(G-100%);194(G-100%);195(A-100%);198(C-38%,G-93%,T-7%);199(G-100%);201(A-100%);205(G-100%);206(G-12%,A-99%);208(C-100%);210(T-100%);214(C-100%);215(C-100%);218(G-7%,C-100%);227(C-76%,A-70%);228(A-100%); | G;G;C;G;G;A;G;C;G;C;G;G;G;A;G;C;G;C;C;A;C;C;C;G;G;C;C;G;A;A;G;C;A;T;T;G;G;G;A;C;G;A;G;A;C;T;C;C;C;C;A | G;G;C;G;G;A;G;C;A/G;C;G;G;G;A;G;C/G;G;G/C;C;A;C;C;C;G;G;C;C;G;A;A;G;A/C;A;T;T;G/T;G;G;A;G;G;G/A;G;A;C;T;C;C;C/G;A;A |
| 87 | AATTTTGTGTCGGCATGCATTGAAA | ATAGCTTTCTCAAATGCTTCCTTGG | 40(A-100%);52(G-100%);59(C-7%,A-100%);60(A-21%,G-100%);85(A-21%,G-100%);89(C-100%);99(A-44%,G-100%);105(C-100%,T-44%);135(G-100%);138(C-21%,T-100%);139(C-100%);142(T-100%);178(A-7%,G-100%);201(C-100%);202(G-7%,T-100%);212(G-61%,T-100%); | A;G;A;G;G;C;A/G;T/C;G;T;C;T;G;C;T;T | A;G;A;A/G;A/G;C;G;C;G;C/T;C/T;T;G;T/C;T;G/T |
| 88 | CGTAGCAATAACTCCTATCATCAACC | TCCATTTTCTTCATGGAGGTGAGAA | 57(A-46%,T-98%);67(G-100%,A-21%);75(A-30%,G-100%);77(C-100%);83(C-100%);93(A-38%,G-100%);108(C-100%);126(T-100%);128(A-100%);129(C-44%,T-97%);150(A-30%,T-100%);166(A-7%,G-100%);183(A-46%,G-98%);185(T-100%);187(C-44%,T-97%);189(C-100%);194(A-6%,G-100%);214(G-30%,A-100%);218(G-100%); | T;A/G;G;C;C;G;C;T;A;T/C;T;G;G;T;C/T;C;G;A;G | T;A/G;G;C;C;G;C;T;A;T/C;T;G;G;T;C/T;C;G;A;G |
| 89 | ACCCATTAAAATAAACATTGATGCCA | AACAAAAAGAAGTGAGTTTGGGCAT | 38(T-100%);49(G-20%,A-100%);50(A-39%,C-99%);52(A-100%,T-8%);61(C-99%,T-32%);65(A-54%,C-98%);67(A-93%,G-72%);76(C-100%);78(A-54%,T-98%);79(C-8%,T-100%);80(A-100%,T-13%);81(T-100%);89(A-100%,T-8%);95(T-100%);96(C-100%,T-6%);109(A-99%,G-17%);113(C-100%);125(A-9%,G-100%);128(G-6%,A-100%);131(C-6%,T-100%);134(C-93%,A-72%);144(T-100%);148(A-100%);152(G-100%);159(T-100%);162(A-99%,C-35%);166(A-54%,C-98%);170(C-100%,T-7%);171(A-100%,T-33%);179(C-100%,T-16%);180(C-100%,T-16%);184(A-33%,G-100%);193(C-31%,T-100%);207(A-98%,T-54%);208(C-93%,T-73%); | T;A;C;A;T/C;C;A/G;C;T;T;A;T;A;T;C;A/G;C;G;A;T;C/A;T;T/A;G;T;C/A;C;C;A;C;C;G;T;A;T/C | T;A;C;A;C;C;A;C;T;T;A;T;A;T;C;A;C;G;A;T;C;T;A;G;T;A;C;C;A;C;C;G;T;A;C |
| 90 | CAATTTTGAGCAGGTTTCTTTAGGC | GAAAATCCGAAAACGGGAAAACCA | 48(C-100%);51(C-100%);53(G-14%,A-100%);55(T-100%);58(C-100%);63(T-100%);64(G-100%);65(A-8%,G-100%);67(A-17%,G-100%);68(A-100%);81(C-18%,T-100%);86(A-21%,G-100%);88(G-100%);92(A-100%);93(A-100%);99(A-17%,G-100%);105(C-100%,T-14%);106(G-100%,A-17%);123(G-100%);124(A-40%,G-97%);126(T-100%);128(G-100%);133(T-100%);134(A-100%);135(G-100%);139(G-100%,A-16%,T-8%);142(A-26%,G-100%);149(C-100%);154(C-100%,T-5%);155(C-100%,T-16%);157(G-100%);163(A-100%);168(C-65%,T-93%);169(G-77%,T-89%);171(G-100%,T-18%);177(A-100%);178(C-5%,T-100%);179(G-100%);180(A-93%,G-65%);185(C-100%);189(A-100%);191(T-100%);192(C-100%,T-18%);196(A-100%);211(C-86%,T-74%);216(G-100%);223(G-97%,T-40%);226(G-24%,A-100%);229(T-100%);231(C-100%,T-6%);236(C-46%,T-96%); | C;C;A;T;C;T;G;G;G;A;C/T;G;G;A;A;G/A;C;A/G;G;G/A;T;G;T;A;G;A/G;A/G;C;C;T/C;G;A;C/T;G/T;G/T;A;T;G;G/A;C;A;T;T/C;A;C/T;G;G/T;A/G;T;T/C;T/C | C/T;T/C;A;T/G;C;C/T;G/A;A/G;G;A;T;G;G;A;A;G;C;A/G;A/G;G/A;T;G;T/G;A/G;T/G;A/G;A/G;C;C/-;C/T;G/A;T/A;C;G;G;G/A;T;G/A;G;C/G;A/C;T/C;G/C;A/G;C;G/T;T/C/G;A;T/G;C;T/C |
| 91 | TCTAACAAAAGAAGCCAACAAGCAC | CACTGGGCTGCCTGTTCAA | 49(C-34%,T-100%);56(A-23%,T-100%);58(A-96%,G-79%);60(T-100%);91(T-100%);97(C-6%,T-100%);109(A-39%,G-100%);169(T-100%);175(G-78%,A-99%);178(A-37%,C-100%);185(A-37%,G-100%); | T;A/T;A/G;T;T;T;G;T;A/G;C;G | T;T;G/A;T;T;T;G;T;A/G;A/C;A/G |
| 92 | TTTTGCAGAAAAACTCCCCCAATTT | AGCCATGCTTGCCTTCATCA | 54(A-39%,T-91%);59(C-100%);73(A-100%);76(A-37%,C-97%);78(C-8%,T-100%);81(G-100%);94(C-100%);96(G-99%,C-22%);97(T-100%);100(T-100%);129(G-100%);135(G-100%,T-6%);165(A-100%);186(T-100%);192(C-99%,T-16%); | T;C;A/G;C;T;G;C;C/G;T/C;T;G;G;A;T;C | T;C;A;A/C;T;G;C;G/C;T;T;G;G;A;T;C |
| 93 | TTTCCGGTCAACATACAGCCATTA | TATGCTTCCAAGAAACTTTGAACCA | 38(C-100%);45(G-100%);60(T-100%);66(C-100%);78(C-100%);79(G-100%);84(A-100%);117(A-42%,G-95%);122(A-99%);126(C-99%,T-6%);161(C-100%);162(G-100%);171(T-100%);186(A-32%,G-87%);187(A-100%);225(G-100%);232(A-100%);233(A-100%);234(A-39%,T-94%); | C;G;T;C;C;G;A;G;A;T/C;C;G;T;G;A;G;A;A;T/A | A/C;G;T;T/C;C;G;T/A;G;A;C;C;G;T;G;A;A/G;A/G;A;T/A |
| 94 | TTTGCGCTAGGTAGGTAAATTTTCC | GTTTCTCTGTGACAAATGGCAAGTA | 44(C-14%,T-100%);48(A-100%);50(G-8%,A-100%);57(A-8%,T-100%);76(C-100%);97(A-100%);106(T-100%);130(G-14%,A-100%);132(A-100%);133(G-100%);142(A-6%,G-100%);166(C-10%,G-100%);172(C-100%);177(C-100%,T-14%);211(G-100%);214(G-100%);215(C-10%,T-100%);223(C-100%,T-11%); | T;A;A;T;C;A;T;A;A;G;G;G;C;C;G;G;T;C | T/C;A;A;T;C;A;T;A;A;G;G;G;C;C/T;G;G;T;C |
| 95 | ATCATGAATATTGAGCCTGCAATGC | ATGGTATCATGGAAGCAAGCTTTTC | 45(A-100%);57(A-8%,T-100%);60(C-100%,T-9%);66(T-100%);111(T-100%);117(A-100%);120(A-9%,G-100%);126(A-100%);129(G-100%);146(C-100%);148(G-16%,A-100%);157(A-100%);168(C-100%);171(G-100%);174(G-98%,C-35%,T-47%);198(C-23%,T-100%);209(G-100%);212(G-100%);214(A-8%,C-100%); | A/T;T;C;T;T;A;G;A;G;C;A;A;C;G;C/G;T;G;G;A/C | A;T;T/C;T;T;A;G;A;G;C;A/G;A;C;G;C/G;T;G;G;C |
| 96 | TGAATGTGATTCAAGTTTAAAAATTTTCAA | ACCATAGGATTGAATTCTCTCAAGGA | 43(T-100%);54(C-18%,T-100%);64(A-9%,G-100%);65(A-9%,c-100%);68(G-9%,t-100%);96(C-100%);163(C-100%);165(A-14%,G-100%);210(G-100%,A-18%);230(C-100%,T-6%); | T;C/T;G;C;T;C;C;A/G;G/A;C | T;T/C;G;C;T;C;C;G;A/G;C |
| 97 | GCCAAACAGAAAGAAAGAGAAAGCA | CAGGGACATTGGGGAGCATTC | 36(T-96%);41(C-11%,G-23%,T-99%);46(C-8%,T-100%);50(C-38%,T-100%);53(A-29%,C-38%,T-96%);55(A-100%);61(C-14%,T-100%);63(A-42%,C-99%);83(G-100%);94(G-100%);119(G-100%);161(C-100%);170(C-100%);191(G-100%);196(A-98%,G-25%);209(C-100%,T-14%);212(C-14%,G-100%);215(C-91%,T-85%);218(A-100%); | T;T;T;T;T;A;T;C;G;G;G;C;C;G;A;C;G;T;A | T;T;T;T/C;T/C;A;T/C;C/A;G;G;G;C;C;G;A;C/T;C/G;C/T;A |
| 98 | TTGCATGTTAAATCTTGCCTCAAGT | TTTCACGTGCATCTTAGGAGAAATG | 37(C-100%);45(T-100%);56(G-100%);61(A-100%);66(A-15%,G-100%);72(G-100%);74(G-100%);85(G-100%);86(C-97%,T-67%);87(T-100%);89(T-100%);102(A-15%,T-100%);103(A-100%);118(G-100%);129(A-100%);138(T-100%);140(A-100%);143(A-100%);145(A-100%);151(G-100%);154(G-100%);159(C-100%);171(G-100%,T-15%);183(G-15%,A-100%);190(A-100%);204(C-100%);208(G-100%);209(C-100%);210(A-49%,G-86%);211(C-15%,T-100%);213(C-100%);215(A-7%,C-100%);218(G-42%,A-99%);220(C-100%,T-16%);221(A-7%,G-100%);223(T-100%);230(G-100%);231(C-100%,T-8%);233(G-16%,A-100%); | C;T;A/G;A;G;G;G;G;C/T;T;T;T;A;G;A;T;A;A;A;G;G;C;G;A;A;C;G;G/C;G/A;T;C;C;G/A;C;G;T;G;C;A | C;T;G;A;G;G;G;G;C;T;T;T;A;G;A;T;A;A;A;G;G;C;G;A;A;C;G;C;A;T;C;C;A;C;G;T;G;C;A |
| 99 | TACACACTTCATAATGCACAATCAT | TTGACATGCCCATAATGATCTACCA | 41(c-100%);66(C-90%,T-16%);67(G-73%,A-40%,T-8%);69(T-98%);96(T-100%);100(C-100%,T-6%);103(C-98%,T-7%);108(C-96%,T-19%);109(C-97%,T-19%);115(A-9%,G-98%);127(G-96%,A-19%);175(G-100%);210(T-100%);216(A-100%); | C;C;G/A;T;T;C;C;T/C;C/T;G;G/A;G;T;A | C;C;G;T;T;C;C;C;C;G;G;G;T;A |
| 100 | AACAAGATCAATCAATCAGGATCAA | TGATGGAGGGTGGATCGAATTC | 41(A-100%);45(C-100%);51(C-24%,a-100%);52(t-100%);53(C-6%,t-100%);56(C-25%,t-100%);59(A-10%,t-100%);61(G-6%,a-100%);70(A-47%,T-100%);76(G-30%,A-100%);121(A-100%,G-15%);124(T-100%);136(C-100%);162(T-100%);182(C-100%);187(C-100%);190(G-100%,T-29%);208(A-9%,G-100%);226(G-11%,A-100%);241(G-100%); | A;C;A;T;T;T;T;A;T/A;A;G/A;T;C;T;C;C;G;G;A;G | A;C;A;T;T;T;T/A;A;T/A;A/G;A;T;C;T;C;C;G/T;G;A;G |
| 101 | ACTTAAGTCCTCTTCTCACTGTTGA | TGCATCATCAATGGCAAAGAAGAAT | 38(G-100%);47(C-17%,T-100%);56(C-100%);68(C-100%,T-17%); | G;T;C;C | G;T;C;C |
| 102 | AACCATGTTTCAGCTTCATCAG | AATCTCCTTTTCTGCAATAATTTTATTAAAAA | 66(A-100%);78(G-100%);87(C-5%,T-100%);111(C-100%);117(G-10%,A-100%);123(G-13%,A-100%);132(C-100%);138(G-100%);150(G-100%);159(C-100%);162(A-100%);163(G-100%);182(G-100%);189(G-100%);194(T-100%);200(A-100%);201(C-100%);202(A-21%,C-99%,T-16%);227(T-100%); | A;G;T;C;A;A;C;G;G;C;A;G;G;G;T;A;C;C;T | A;G;T;C;A;A;C;G;G;C;A;G;G;G;T;A;C;C/T;T |
| 103 | CTCTCTCTCTCTCTCTTTTAGCAGC | TGCAGAATTCATAATGGATTCTATAGGA | 88(A-27%,T-98%);91(C-6%,T-100%);93(C-100%);137(C-31%,t-97%);153(G-100%);193(A-31%,G-97%);200(A-100%);205(A-100%);212(G-99%,T-17%);216(A-100%); | T;T;C;T;G;G;A;A;G;A | T;T;C;T;T/G;T/G;A;A/T;G;T/A |
| 104 | GTTACATCCACGAATTCAACAAACG | ATTGAGTTTTTAATTACCGCATTGG | 36(C-100%);37(C-100%);38(T-100%);47(C-98%,A-12%);50(C-100%);62(C-96%,T-49%);65(C-100%);74(G-36%,A-93%);86(C-100%);91(C-10%,T-100%);131(C-100%);134(T-100%);137(C-97%,T-44%);138(C-97%,T-44%);140(C-100%);144(A-13%,C-100%);146(G-42%,C-91%);152(C-100%);155(A-100%);159(T-100%);178(A-21%,T-97%);179(C-10%,T-99%);185(C-100%);197(C-24%,T-99%);199(T-100%);201(T-100%);206(T-100%);213(C-100%);215(G-100%);232(C-100%);235(C-98%,A-7%); | C;C;T;C;A;C;C;A;C;T;C;T;C;C;C;C;C;C;A;A;T;C;C;T;T;T;T;C;G;A;C | C;C;T;C;C;C;C;A;C;T;C;T;C;C;C;C;C;C;A;T;T;T;C;T;T;T;T;C;G;C;C |
| 105 | CCCACAATTAATACCATTCAGTATATCCC | GAATTGGTGTGGGGTGAATTGAAG | 64(A-100%,T-6%);65(C-100%);67(C-10%,T-100%);70(C-100%,T-6%);71(T-100%);89(A-35%,T-100%);99(T-100%);109(T-100%);157(T-100%);168(C-100%);172(G-100%);174(G-100%);191(C-100%,T-7%);192(G-100%);193(G-100%);196(A-16%,G-98%);211(T-100%);212(G-100%);213(C-100%);226(C-100%); | A/T;C;T/-;T/C;T;A/T;T;T;T;C;G;G;C;G;G;G;T;G;C;C | A;C;C/T;C;T;T/A;T;T;T;C;G;A/G;T/C;G;G;G;T;G;C;C |
| 106 | GTGGCATCAGAGCTAAACATCATG | AGGCTGTCTGTTAATCACTCAACAT | 44(T-100%);60(A-100%);84(A-7%,G-100%);93(A-27%,G-100%);99(A-100%);102(C-100%);114(G-100%);156(A-100%);171(A-100%,C-18%);179(C-9%,T-100%);223(a-100%); | T;A;G;G;A;C;G;A;C/A;T;A | T;A;G;G;A;C;G;A;A;T;A |
| 107 | ATTACATAAACTGCAGCACAACCTC | AAATCTTTGAATTCATACCGCCTCG | 60(A-100%,T-9%);64(A-56%,C-99%);72(C-14%,G-100%);73(C-100%,T-16%);94(G-100%);106(G-100%,A-36%);130(C-15%,T-100%);143(C-100%,T-15%);151(C-36%,T-100%);152(G-100%);153(G-17%,C-100%);158(C-100%);173(G-100%);175(C-100%);195(A-100%,T-11%);208(C-16%,T-100%);210(C-14%,T-100%);229(T-100%);232(C-36%,T-100%);233(A-15%,G-100%);235(A-100%); | A;C/A;G/C;C;G;G/A;T;C;T/C;G;C;C;G;C/T;A;T;T/C;T;T;G;G/A | T/A;C;G;T/C;G;A/G;C/T;T/C;C/T;G;G/C;C/A;G;C;A;C/T;T;T;T/C;G/A;A |
| 108 | CTCACATCCTGCTTCCATTACCA | TAGACCTCTCAGCTACCTGGAAG | 34(G-8%,C-100%);64(G-100%,T-7%);92(A-14%,G-100%);100(C-100%);115(C-100%);154(A-100%);172(A-100%);184(C-15%,T-100%);186(C-100%,T-8%);187(C-6%,T-100%);193(A-100%);205(T-100%); | C;G;G;C;C;A;A;T;C;T;A;T | C/G;G;A/G;C/T;C;A;G/A;T;C/T;T;A;T |
| 109 | CAGAGACTAGCTACCAAAGAAGGTT | GACCCAAACATGACTAAATCGATCG | 43(G-97%,c-24%);53(A-8%,t-100%);54(c-100%);62(c-100%);104(G-100%);107(C-30%,T-97%);115(C-100%,T-8%);116(G-100%);129(A-100%);136(G-100%);147(A-13%,T-99%);148(A-13%,T-99%);161(A-97%,G-30%);165(C-99%,T-10%);166(C-30%,T-97%);177(C-100%);179(G-24%,T-97%);205(G-100%);206(A-100%);218(C-100%);220(A-9%,G-100%); | C/G;T;C;C;G;T/C;C;G;A;G;T/A;T/A;G/A;C;C/T;C;T/G;G;A;C;G | G;T;C;C;G;T;C;G;A;G;T;T;A;C;T;C;T;G;A;C;G |
| 110 | CTTTATGTGGGCTATTTACACCAGC | ATTGTGCTTTTGGATGTGACATGAA | 38(g-100%);41(t-100%);47(A-8%,t-100%);52(C-8%,t-100%);101(G-100%);111(C-100%);118(T-100%);128(A-100%);157(A-15%,C-100%);161(A-12%,G-100%);178(T-100%);179(T-100%);182(A-18%,T-100%);205(A-100%,G-25%); | G;T;T;T;G;C;T;A;C;G;T;T;T;A/G | G;T;T;T;G;C;T;A;C;G;T;T;T;A |
| 111 | GTCTAGTAGGTCATTATTGAGAGGGG | TGCTTGGCTTTAATTTTTATTGTCCA | 53(A-100%);57(A-100%);58(T-100%);60(C-97%,T-22%);62(G-100%);66(G-100%);67(A-12%,G-100%);69(T-100%);74(C-98%,A-21%);75(C-100%,T-8%);86(C-100%);90(A-84%,G-79%);97(C-11%,G-98%);106(C-84%,G-79%);114(A-69%,G-89%);116(A-98%,C-20%);123(C-100%);139(T-100%);140(A-100%,T-12%);159(G-92%,T-64%);160(T-75%);161(A-81%,C-23%,T-69%);162(A-67%,G-91%);164(G-78%);169(C-100%);171(G-98%,C-21%);176(G-100%);177(C-79%,T-84%);180(C-100%);183(G-12%,A-98%);190(C-100%,T-22%);223(G-22%,A-100%); | A;A;T;C;G;G/T;G;T;A/C;C;C;A/G;G;C/G;G;C/A;C;T;A;G;C/-;A/T;G;-/G;C;G/C;G;T/C;C;A;C/T;A/G | A;A;T;C;G;G;G;T;C;C;C;G;G;G;A;A;C;T;A;G;-;A;G;-;C;G;G;C;C;A;C;A |
| 112 | TGGAAGAGAAAAATCATTACATTCGCA | TAGACACACGATTACCTGGTTGAAT | 77(C-100%);80(G-61%,A-97%);81(G-100%);121(C-27%,T-99%);173(G-17%,T-99%);221(C-100%); | C;A/G;G;T;T;C | C;A;G;T;T;C |
| 113 | CAAACTCCGATCCCCATAAGAAAAG | AATTCGTCGGCTCCACAGTC | 66(A-100%);145(C-100%,T-11%);154(C-100%);171(G-15%,C-99%);172(C-100%);182(G-100%);196(C-86%,T-72%);217(C-100%);232(A-46%,C-93%,T-7%); | A;C;T/C;C;C;G;T/C;C;C | A;C;C;C;C;G;C;C;A |
| 114 | GAGCGGGAGATTGTACAATGAGG | TAACAGCACCAACATTACTCAATCC | 34(G-9%,A-91%);46(G-9%,T-91%);60(G-20%,A-95%);82(c-91%,T-9%);83(G-9%,t-91%);93(G-100%);119(G-9%,A-91%);123(C-100%);145(C-94%,T-15%);179(G-82%,A-48%);185(G-9%,A-91%);191(A-9%,G-91%);234(C-97%);238(T-100%); | A;T;A;C;T;G;A;C;C;A;A;G;C;T | A;T;A;C;T;G;A;C;T;A;A;G;C;T |
| 115 | GGAGTTCAAATTTATCTGGCATCCA | AGATAAAGTTGAAATCTTATCACTGGT | 60(A-99%,G-44%);61(C-8%,G-100%);62(T-100%);63(C-99%,G-44%);79(A-100%);84(T-100%);103(C-100%);110(C-99%,a-44%);130(a-100%);156(C-15%,T-100%); | G/A;G/C;T;G/C;A;T;C;A/C;A;T | A;G;T;C;A;T;C;C;A;T |
| 116 | TGATAATAACGTGTGACAGAATTGT | GTGCTCTGTTTTAAAGCGGTTTAAG | 40(T-100%);41(C-100%);42(A-100%);44(C-100%);50(A-100%,G-38%);51(C-100%);56(C-100%);97(G-26%,A-100%);104(C-100%,T-7%);107(A-100%);113(A-100%);119(T-100%);124(C-26%,T-100%);127(C-26%,T-100%);136(C-100%,T-7%);146(G-100%);148(G-100%);151(C-67%,T-97%);157(G-100%);166(G-14%,A-100%);168(C-100%);169(A-9%,G-38%,T-100%);199(A-100%);200(G-100%);210(C-100%,T-9%);215(A-100%);223(A-36%,T-100%);224(G-99%,T-43%);227(G-100%); | T;C;A;C;A/G;C;C;A;C;A;A;T;T;T;C;G;G;T/C;G;A;C/T;T;A;G;C;A;T/A;G;G | G/T;T/C;A;C;G/A;C/A;C;A/G;C;A;A;T;C/T;C/T;C;G;G;C/T;G;A;C;T;A;G;C/T;A;T;G;G |
| 117 | GTTTATGCGATTGGTTTATTTGGCA | CTGAAATGCAGGGAGTTAAGATTCC | 40(A-100%,T-11%);46(C-100%);61(A-42%,G-98%);70(C-11%,G-100%);73(G-99%,T-7%);84(C-100%);110(C-100%);112(G-99%,A-61%);124(G-41%,A-100%);127(A-12%,G-100%);129(A-12%,G-100%);136(G-12%,C-100%);137(A-100%);139(G-12%,C-100%);145(C-100%);151(A-89%,G-85%);157(T-100%);160(A-12%,G-100%);162(A-12%,G-100%);169(A-12%,G-100%);172(A-12%,C-100%);175(C-12%,A-100%);176(T-100%);196(G-99%,T-62%);204(G-100%,T-12%);214(G-21%,A-100%);220(A-12%,G-100%);224(C-100%,T-11%);232(A-11%,T-100%); | A;C;G;G;G;C;C;G;A;G;G;C;A;C;C;A;T;G;G;G;C;A;T;G;G;A;G;C;T | A;C;G;G;G;C;C;G;A;G;G;C;A;C;C;A;T;G;G;G;C;A;T;G;G;A;G;C;T |
| 118 | TAAAGCTTGTTGTTGTTGTCGTACT | ATTCTCACTTCAGTTGTGGTGACAA | 41(A-13%,T-100%);43(C-100%,T-19%);109(T-100%);133(A-100%);145(T-100%);154(G-100%);175(C-100%,T-18%);184(C-100%,T-14%); | T;C;T;A;T;G;C;C | T;C/T;T;A;T;G;T/C;C |
| 119 | GGTTTGCAGTCGATGTTTCTGAATA | TCATCAAATTCTAAAATCGAGCTGT | 38(A-6%,G-100%);63(T-100%);81(G-21%,A-98%);82(G-100%,C-13%);86(A-100%);87(A-100%);90(C-100%);105(T-100%);115(A-6%,G-99%);123(A-100%);125(T-100%);130(A-6%,G-99%);131(T-100%);134(C-100%);137(C-40%,A-100%);143(A-100%);144(A-9%,G-100%);153(G-99%,T-16%);177(T-100%);178(G-100%);198(C-97%,T-66%);215(A-100%,G-23%);227(A-100%);232(C-100%,T-9%); | G;T;A;G/C;A;A;C;T;G;A;T;G;T;C;A;A;G;G;T;G;C;G/A;A;C | G;T;A;G/C;A;A;C;T;G;A;T;G;T;C;A;A;G;G;T;G;C/T;A/G;A;C |
| 120 | AAGCATGCGAAAATAAAGAAAGCAC | AGCAGTGCTTTTATCATAATGTCCT | 36(C-79%,G-21%);47(A-100%);49(A-79%,G-21%);52(A-100%);53(G-100%);54(G-83%,A-18%);56(G-100%);57(A-83%,G-18%);62(A-9%,C-100%);64(G-100%);83(G-7%,t-100%);107(G-100%);113(T-100%);146(A-79%,G-21%);161(G-100%);182(A-100%);212(C-100%);233(T-100%); | G;A;G;A;G;A;G;G;C;G;T;G;T;G;G;A;C;T | C;A;A;A;G;G;G;A;C;G;T;G;T;A;G;A;C;T |
| 121 | CTTCGTCGCCGTGATCTTCTAAGAT | CCTCCGCCGCTTAATCCAAG | 37(G-100%);38(G-100%);44(A-44%,G-100%);47(T-100%);56(A-100%);71(G-100%);80(T-100%);89(G-100%,T-6%);90(G-100%);104(T-100%);110(C-50%,G-100%);122(T-100%);125(G-100%);133(C-100%);137(A-7%,G-100%);149(T-100%);155(T-100%);164(G-21%,C-100%);167(G-100%);175(a-100%);176(g-100%);215(G-100%);233(G-100%,T-6%); | G;G;G;T;A;G;T;G;G;T;G;T;G;C;G;T/G;T;C;G;A;G;G;G | G;G;G;T;A;G;T;G;G;T;G;T;G;C;G;T;T;C;G;A;G;G/A;G |
| 122 | TTGGGAATGTTCTAGTAAGAAAAGAAA | CAACTTAGAAAGCAGGAAAATCACT | 63(G-7%,a-98%);99(A-100%);138(A-99%,G-17%);151(C-100%);164(C-16%,T-99%);189(C-99%,T-17%);219(A-99%,G-17%); | A;A;A;C;T;C;A | ND |
| 123 | GATGCTGAGCTCCTCTTACACTTAT | GCTCCAAATAGACCATCAATCATCA | 65(C-92%,T-43%);70(A-43%,G-92%);79(G-12%,T-99%);106(A-99%);118(G-99%);122(C-26%,T-97%);155(G-99%);160(G-100%);183(G-43%,A-92%);191(G-100%);198(T-100%);201(C-24%,A-97%);225(A-100%);226(G-65%,T-77%);229(C-26%,G-97%);238(G-100%);240(C-92%,T-43%); | C;G;T;A;G;T;G;G;A;G;T;A;A;G/T;G;G;C | C;G;T/G;A;G;T/C;G;G;A;G;T;A;A;G/T;C/G;G;C |
| 124 | ACAACCATAAGTGTATCAAAGACCC | TAATCTTCATCCAACCGAGAAGAAG | 37(T-100%);67(G-99%);77(G-13%,A-100%);80(G-100%);83(C-100%);90(C-100%);91(C-100%);96(G-98%,C-50%,T-9%);99(G-100%);101(T-100%);119(G-100%);128(C-9%,G-100%);131(C-100%);133(G-100%);167(C-18%,T-100%);176(C-100%,T-18%);205(A-100%);214(T-100%);218(T-100%);226(T-100%);227(C-19%,G-100%);239(C-26%,T-100%);240(G-100%); | T;A;A;G;C;C;C;C;G;T;G;G;C;G;T;C;A;T;T;T;G;T;G | T;G;A/G;G;C;C;C;T/G;G;T;G;G;C;G;T/C;C/T;A;T;T;T;C/G;C/T;G |
| 125 | GAAGGGATAGCAATGTGAACTTGTG | AACACATGTTCTCTCCTCCACTG | 40(A-8%,G-100%);47(A-54%,G-96%);53(C-100%,T-17%);55(A-92%,G-31%);58(G-100%);76(G-98%,T-11%);84(C-100%,T-8%);85(G-100%);86(A-95%,T-12%);87(C-100%,T-5%);89(A-19%,G-98%);97(G-33%,A-97%);98(G-92%,A-33%);103(C-6%,T-100%);113(G-100%);114(A-16%,G-99%);119(A-100%);120(C-13%,T-98%);122(A-69%,G-85%);130(C-91%,T-56%);131(A-8%,G-99%);135(A-100%);143(G-43%,A-97%);144(C-100%);145(A-67%,G-86%);149(T-100%);154(C-12%,T-96%);156(A-17%,G-100%);160(C-89%,T-57%);161(A-7%,G-99%);164(C-93%,T-22%);168(C-100%,T-10%);171(C-9%,T-100%);173(C-31%,T-92%);178(A-48%,G-93%);179(G-100%);183(C-100%,T-10%);185(A-6%,G-100%);189(C-100%);190(A-19%,G-99%);192(G-92%,A-39%);196(G-90%,A-22%,T-20%);197(A-93%,G-22%);211(C-100%,T-7%);214(A-6%,G-100%);215(A-98%,G-21%);219(C-6%,T-100%);238(A-56%,G-91%); | G;A/G;T/C;G/A;G;G;C;G/A;A;C;G;G;G;T;G;G;A;T;G/A;G/C;G;A;A;C;G/A;T;T;A/G;C;G;C;C;T;T/C;G;G;T/C;G;C/T;G;G;G;A;C;G;G/A;T;G | G;A/G;C;A;G;G;C;G;A;C;G;A;G;T;G;G;A;T;G;T;G;A;A/G;C;G;T;T;G;T;G;C;C;T;T;G;G;C;G;C;G;G;G;A;C;G;A;C/T;A |
| 126 | AACCCAAGAAAATCATGAAAGGATT | ACTACGGCGAGTTCATAGC | 61(C-97%,T-16%);66(G-15%,A-98%);117(G-100%);147(A-88%,G-50%);150(A-34%,G-94%);198(G-100%);210(C-99%,T-8%); | C/T;A;G;A/G;G;G;C/T | C;A;G;G;G;G;C |
| 127 | TGAAACAGCAAGAACCAAATGAAGT | TTTTATTGGAATTCATAACCAAAGCC | 52(C-100%);76(C-100%);79(C-58%,A-98%);133(A-97%,G-43%);148(A-8%,G-100%);213(A-8%,G-100%); | C;C;A/C;G/A;G;G | C;C;A;G/A;G;G |
| 128 | GATATGCCGGTGCCTTGATGG | CAATTCCTCCCCTGGTAAGATCAG | 32(A-100%);34(A-27%,G-100%);40(G-100%,T-35%);41(G-35%,A-100%);43(G-35%,A-100%);54(G-35%,A-100%);58(G-35%,A-100%);67(G-7%,A-100%);73(G-100%);76(T-100%);77(G-100%);79(C-100%,T-12%);80(A-100%);82(A-100%);89(G-100%);101(C-8%,G-100%);105(C-100%,T-6%);111(A-27%,G-100%);125(G-58%,A-99%);128(G-100%);131(G-100%);133(A-58%,G-99%);136(A-43%,C-100%);137(G-100%,T-27%);139(G-27%,T-100%);142(G-100%);145(G-100%);170(G-100%);190(G-35%,A-100%);191(A-11%,G-100%);215(C-35%,T-100%);220(C-100%,T-35%);223(C-100%,T-27%);230(A-100%);232(G-100%); | A;G;G;A;A;A;A;A;G;T;G;C;A;A;G;G;C;G;A/G;G;G;A/G;C;G;T;T/G;A/G;G;A;G;T;C;C;A;G | A;G;G/T;G/A;G/A;A/G;A/G;A;G;T;G;C;A;A;G;C/G;C/T;G;A;G;G;G;C;G/T;T;G;G;G;A/G;G/A;T/C;C/T;C;A;G |
| 129 | TAGCTTAGATTCAAGGGATATGCCG | TCAACAATTGCCTGAATTCAACAGA | 48(G-6%,T-99%);70(C-13%,T-99%);84(C-100%,T-6%);92(A-10%,G-99%);97(G-99%,A-13%);104(G-100%);107(G-100%,T-16%);111(A-100%);116(A-18%,C-100%);146(A-100%);150(C-99%,T-13%);169(T-100%);175(G-10%,A-99%);183(C-100%);185(C-100%);198(G-100%);205(A-99%,G-28%);208(T-100%);210(G-100%); | T;T/C;C;G;A/G;G;G;A;C/A;A;C/T;T;A;C;C;G;G/A;T;G | T;T;C;G;G;G;T;A;C;A;C;T;A;C;C;G;A;T;G |
| 130 | TTTGCGGAAGTCATGTTCGC | AGAGTTCCTTTTTCCAGGTATTCGT | 40(C-29%,A-100%);41(A-100%);57(T-100%);62(G-100%);69(G-27%,T-100%);75(G-100%);80(A-9%,G-100%);111(C-100%);120(C-100%);124(G-73%,T-94%);129(C-94%,T-73%);138(A-100%);150(C-100%,T-7%);158(A-6%,G-100%);168(C-100%);201(C-100%);210(C-100%,T-16%);228(A-6%,G-100%); | A;A;T;G;T/G;G;G;C;C;T/G;C/T;A;C;G;C;C;C;G | A;A;T;G;T;G;G;C;C;T;C;A;C;G;C;C;C;G |
| 131 | TAGCCCTGATAAACCCAAACCAG | GCGTGTCATCTATAATTGAAAGCGT | 36(A-95%,C-55%);53(C-22%,T-100%);88(A-26%,T-97%);109(G-97%,T-26%);156(G-96%,A-28%);173(G-25%,T-97%);186(T-100%);193(A-96%,C-28%);209(A-13%,G-97%);210(A-12%,G-100%);212(G-100%); | A/C;T;A/T;T/G;G/A;T;T;A/C;G;G;G | C/A;T;A/T;T/G;A/G;T/G;T;C/A;G/A;G;G |
| 132 | CCCATTTTCCCACCATAGAGAAATG | GAAGGCCTGGAGAGAGATATTTGAA | 43(C-100%);44(G-100%);47(A-10%,G-100%);59(T-100%);60(A-14%,G-100%);64(A-100%,T-14%);70(C-100%);71(G-100%);72(A-95%,G-35%);73(C-100%,T-14%);75(C-100%);76(C-100%);79(A-14%,C-100%);87(C-100%);88(A-20%,G-100%);96(A-22%,G-100%);104(A-14%,G-100%);112(C-100%,T-14%);115(C-98%,T-18%);138(G-10%,T-100%);140(C-100%);144(C-100%,T-6%);150(A-14%,G-100%);154(G-13%,A-100%);155(G-100%);157(C-7%,T-100%);162(C-100%);163(C-100%);166(C-100%);173(C-99%);176(C-100%,T-14%);182(C-100%);184(G-100%);186(G-100%,T-14%);189(C-100%,T-6%);190(A-100%,T-14%);192(C-100%);194(A-100%);196(A-14%,G-100%);202(C-100%);207(C-100%);208(T-100%);210(G-100%,T-6%);217(C-100%);218(A-6%,T-100%);219(C-100%,T-14%); | C;G;G;T;G;A;C;G;G;C;C;C;C;C/A;G;G;A/G;C;T/C;T;C;C;G;A;G;T/C;C;C;C;C;C;C;G;G;C;A;C;A;G;C;C;T;G;C;T;C | C;G;G;T;G/A;T/A;C;G;A/G;T/C;C/G;C/A;A/C;C;G;A/G;G/A;C/T;C;T;C;C;A/G;A;G;T;C;C;C;C;C/T;C;G;T/G;C;A/T;C;A;A/G;C;C;T;G;C;T;T/C |
| 133 | TCCAGATTGGACCCCTCAGG | ATCCCATACACCATCACTCGAAATA | 32(G-8%,C-100%);35(C-100%);47(G-11%,A-100%);71(C-100%);86(A-100%,T-6%);89(C-29%,T-100%);117(T-100%);119(t-100%);121(G-13%,a-100%);125(G-8%,t-100%);126(t-100%);130(C-13%,t-100%);136(a-100%);142(A-100%,T-11%);143(A-6%,T-100%);147(A-100%);154(C-100%);157(G-100%);159(A-19%,G-100%);168(G-100%,A-19%);172(G-6%,A-100%);178(C-5%,T-99%);213(C-100%);224(G-99%,A-34%);227(C-6%,T-100%); | G/C;C;A;C;A;T;T;T;A;T;T;T;A;A;T;A/T;C;G;G;G;A;T;C;G;T | C;C;G/A;C;A;T;T/A;T;A/G;T;T;T/C;A;A;T;A;C;G;G/A;G;A;T;C;A/G;T |
| 134 | GCTCAAAAGTTCCACTTGACTATAT | AGAAGCTCCTATATGTGCTAGAGC | 38(g-99%);42(c-100%);51(A-95%,g-15%);52(a-100%);70(G-99%,c-8%);79(T-100%);86(C-100%);88(A-98%,T-17%);139(G-17%,C-98%);148(G-99%);172(C-98%,T-17%);176(A-89%,T-37%);184(C-10%,T-100%);217(G-75%,C-90%);227(A-99%);238(A-100%); | G;C;G;A;G;T;C;A;C;G;C;T;T;C;C;A | G;C;A/IAA;A;G;T;C;A/T;G/C;G;T/C;A/T;T;C/G;A;A |
| 135 | AATGTGTCATCTTTGTTGTTTGCAG | CAGTTCCGAGTATAATCTCCATTCT | 53(A-100%,T-26%);59(T-100%);65(G-17%,C-100%);104(A-100%,T-15%);116(C-100%,T-20%);119(A-100%);128(C-100%,T-17%);131(G-100%);179(T-100%);195(C-99%,T-7%);197(C-7%,T-99%);203(C-29%,T-100%); | A;T;C;A;T/C;A;C;G;T;C;T;C/T | A;T;G/C;T/A;C/T;A;C/T;G;T;C;T;T |
| 136 | TCAAAGGGCAATTGATATGCACATT | CAGGTTGAGTGCTATTAGACCACTA | 37(G-94%,A-82%);64(C-100%);81(C-100%);98(c-100%);138(T-100%);143(C-6%,T-100%);144(A-99%,T-14%);153(C-100%);211(C-14%,T-99%);221(A-98%,T-61%);222(G-100%); | A/G;T/C;C;C;T/-;T;A/T;C;T/C;T/A;G | G;C;C;C;T;T;A;C;T;A;G |
| 137 | CTAGTCATTGTTAAAGCGCATCTGT | ATTGATGAAGAAGCCTCAAAGTTGG | 43(G-98%,T-31%);44(C-6%,G-100%);49(C-100%);56(C-100%);65(G-99%,T-21%);66(G-21%,T-99%);70(G-7%,A-86%,T-68%);72(C-100%);73(C-100%);83(G-21%,T-100%);91(G-95%,T-42%);92(C-7%,T-100%);93(G-7%,C-99%,T-21%);96(C-98%,T-15%);97(T-100%);101(C-100%);102(C-100%,T-21%);105(A-17%,C-21%,G-98%);107(A-100%,T-7%);108(G-100%);111(A-100%,T-10%);112(G-100%,T-7%);114(C-100%,T-17%);124(A-68%,G-89%);125(A-100%);135(G-100%);136(A-100%);139(A-100%);193(C-98%,T-15%);227(C-5%,A-100%); | T;G;C;C;G;T;A;C;C;T;G;T;C;C;T;C;C;G;A;G;A;G;C;G;A;G;A;A;C;A | G/T;G;C;C;T/G;T/G;A;C;C;T;G;T/C;C/T;C;G/T;C;C;C/G;A/T;G;A;T/G;C;G;A;G;A;A;C;A |
| 138 | TTTCCCATAAGACAGCATCAGAAAT | TGCACTTTTAAAGAAGCAAAAACAT | 72(c-100%,T-7%);85(C-100%);93(G-100%);109(A-100%);118(G-100%);121(A-100%,G-19%);136(A-100%);187(A-100%);189(C-100%,A-19%);190(A-40%,G-97%);211(G-100%);219(G-100%);229(A-12%,C-99%);236(C-40%,G-97%); | C;C;G;A;G;A/G;A;A;A/C;A/G;G;G/A;C;G/C | C;C;G;A;G;G/A;A;A;C/A;A/G;G;G;C;G/C |
| 139 | TCATCTCTGTTAACTCATTCGGTCC | CGTAATGGTTCACGTCTTGCTG | 42(G-17%,T-92%);52(G-16%,T-92%);53(C-16%,T-92%);55(G-92%,T-16%);60(A-89%,G-15%);61(C-100%);66(G-100%);90(A-100%);93(G-100%);122(a-100%);123(A-76%,g-35%);130(A-86%,t-19%);132(G-18%,C-91%);135(G-96%);142(T-99%);147(C-16%,G-92%);153(C-12%,T-95%);159(A-7%,G-97%);175(A-100%);185(T-99%);186(G-99%);195(A-100%);198(C-18%,G-88%);201(G-100%);216(C-100%);228(C-89%,T-24%);237(C-11%,T-100%); | T;T;T;G;G;C;G;A;G;A;G;T;C;G;T;G;T;G;A;T;C;A;G;G;C;C;T | G;G;C;T;A;C;G;A;G;A;G;A;G;G;T;C;C;G;A;T;G;A;G;G;C;C;T |
| 140 | CACTATTTGGTTAGGTTGAGCGTTT | CATAGCTCCACTGTATGCTCCTTAC | 58(a-100%);62(G-99%,a-43%);63(C-19%,t-97%);65(C-9%,t-100%);66(A-8%,c-100%);74(A-100%);85(C-7%,T-100%);102(T-100%);104(C-100%);109(G-100%);110(A-100%,G-9%);116(A-100%);119(A-100%);123(g-99%,T-49%);132(g-100%);136(t-100%);138(t-100%);149(C-100%);154(G-100%);155(G-100%);167(T-100%);169(C-100%);172(T-100%);176(A-100%);178(G-100%);182(A-100%,T-22%);184(G-100%);187(C-12%,G-100%);205(G-100%);214(A-99%,G-25%);218(G-100%);223(A-12%,C-100%);224(C-99%,A-43%);225(C-100%);228(C-100%); | A;G;T;T;C;A;T;T;C;G;A;A;A;G;G;T;T;C;G;G;T;C;T;A;G;A;G;G;G;A;G;C;C;C;C | A;A/G;T;T;C;A;T;T;C;G;A;A;A;G;G;T;T;C;G;G;T;C;T;A;G;A/T;G;C/G;G;A;G;C;A/C;C/G;C |
| 141 | CTCGGTCACAGCAAATAAAGAGATC | CAAAATGGCAGAGAAGGAAGAGAAG | 43(C-18%,T-100%);45(G-100%);59(T-100%);62(A-100%);64(C-12%,T-100%);65(G-100%);70(G-100%);73(C-100%);95(C-100%,T-6%);98(C-48%,T-100%);121(G-48%,A-100%);128(A-100%,G-12%);146(T-100%);162(T-100%);164(G-100%);165(C-100%);166(T-100%);171(G-100%);173(C-100%);176(G-100%);183(C-100%,T-44%);188(A-100%);204(G-100%);206(C-44%,G-100%);208(G-44%,A-100%);215(C-42%,A-100%);218(G-7%,A-100%);222(A-100%); | T;G;T;A;T;G;G;C;C;T;A;A;T;T;G;C;T;G;C;G;C;A;G;G;A;A;G/A;A | T;G;T;A;T/C;G;G;C;C/T;T/C;G/A;C/A/G;G/T;C/T;G;C;T;G;C;G;C;A;G;G;A;A;A;A |
| 142 | GCTCCATAAAGCGCTTTTGATTAGG | ACTCCGACCATCAATCGTTCC | 36(G-100%);42(G-7%,A-99%);48(G-100%);57(G-100%);69(G-100%);80(A-100%);129(C-100%);133(A-9%,G-100%);140(T-100%);142(C-100%);148(C-100%,T-8%);149(T-98%);157(C-100%);168(A-15%,T-99%);174(C-8%,t-100%);177(c-100%);183(t-100%);185(c-100%);192(A-99%,G-15%);196(C-100%);197(C-100%);203(C-100%,T-7%);204(C-100%,T-7%);207(G-100%);209(A-100%,T-8%);216(G-15%,T-99%);218(C-100%);222(A-100%);225(C-100%); | G;A;G;G;G;A;C;G;T;C;C;T;C;T/A;T;C;T;C;A/G;C;C;C;C;G;A;G/T;C;A;C | G;A;G;G;G;A;C;G;T;C;C;T;C;T;T;C;T;C;A;C;C;C;C;G;A;T;C;A;C |
| 143 | AGCCCAAATAAGTGGAACTTAAAATG | TGGGGGAAAAATAAAAATACCTGGC | 37(G-100%,T-23%);38(G-99%);40(G-100%);41(G-7%,T-100%);83(A-38%,G-99%);89(A-100%);101(A-12%,G-99%);110(C-99%,T-12%);125(C-100%);182(A-10%,G-100%);197(C-100%);203(A-34%,G-100%);206(G-44%,A-99%);224(T-100%);227(T-100%); | G;G;G;T;G;A;G;T;C;G;C;G;A;T;T | G;G;G;T;G/A;A;G/A;C;C;G;C/G;G;G/A;T;T |
| 144 | TGCCATCTTCTGTCTACTATGTCAA | AACCCTGAGTATTTGACCTCATCAT | 45(C-42%,T-100%);48(A-100%);81(G-100%);88(G-100%,T-10%);93(G-100%);105(G-100%);135(G-97%,A-83%);144(A-99%,T-64%);150(C-100%);175(C-11%,A-100%);186(T-100%);189(C-20%,T-100%);198(T-100%);225(G-100%,T-19%);228(C-100%);236(C-21%,T-100%);240(C-7%,T-100%); | T/C;A;G;G;G;A/G;G/A;A/T;C;A;T;T;T;T/G;C;T;T | T;A;G;T/G;G;G;G/A;A;C;C/A;T;T/C;T;G;C;T;T |
| 145 | TAGCCATAGATTTCGCTGTTTTGTT | TGCTGTGCCATTTCCAATAATTCAT | 67(T-100%);69(C-100%,T-5%);72(C-96%,T-55%);82(T-100%);93(C-100%,T-6%);95(A-100%,T-18%);147(C-100%);197(C-100%);199(C-5%,T-100%);201(C-100%);203(A-18%,T-100%);234(C-100%); | T;C;C/T;T;C;A;C;C;T;C;T;C | T;C;C;T;-/C;A/T;C;C;T;C;T/A;C |
| 146 | TGAGGTTCTGTAATTCTAACCGAGT | AAAGGAGTAGGATGACTGAATTCCC | 39(G-100%,T-9%);45(G-100%);49(A-100%);50(C-98%);51(T-98%);52(A-100%);53(A-6%,C-99%);87(T-100%);114(G-6%,A-100%);117(T-100%);123(G-7%,C-100%);144(T-100%);175(A-100%);184(C-6%,A-100%);186(A-100%);198(G-100%);210(A-100%); | G;G;A;C;C;A;C;T;A;T;C;T;A;A;A;G;A | G;G;A;C/G;T;A;C;T;A/G;T;C;T;A;A/C;A;G;A |
| 147 | TGCCTCAAATAGACCCTAAGTGAAT | TCCTGTTAGGTCTGAGGTGTTG | 48(G-100%);66(G-13%,C-90%);74(T-100%);128(G-100%);158(A-100%);242(A-15%,T-88%); | G;C;T/G;G;A/C;T | G;G;T;G;A;T |
| 148 | TCTTCTTAAAACACAGAGACACCCA | AGGACAGGGATAAAATCAGATGAACA | 44(A-9%,t-98%);66(t-100%);69(g-93%,T-7%);70(a-99%);81(G-100%);84(T-99%);88(C-93%,T-7%);92(C-43%,T-73%);96(A-99%);99(C-43%,A-73%);183(C-93%,T-7%);195(A-9%,G-92%);196(G-99%);209(T-100%); | T;T;G;A;G;T;C;C;A;C;C;G;G;T | T;T;G;A;G;T;C;T;A;A;C;G;G;T |
| 149 | GTGGGTGTTTAGTGTGTAAGCTTG | ATTAATCGCATGTTGATAGTCGGAG | 43(G-100%);46(C-44%,T-57%);61(G-79%,A-26%);64(C-99%);79(C-5%,G-96%);85(T-100%);96(C-57%,G-44%);124(C-22%,T-82%);132(C-100%);139(A-22%,G-82%);143(C-100%);148(T-100%);154(G-83%,A-20%);175(C-84%,G-20%);196(C-82%,T-22%);199(G-100%);213(C-100%); | G;C;A;T;G;T;G;T;C;G;C;T;A;C;C;G;C | G;C;G;C;G;T;G;C;C;A;C;T;G;C;T;G;C |
| 150 | GAGAAACCTTCGACAACTGGAAG | CATCCAAAATAGAGAAAATACAACATCA | 51(A-100%);58(C-100%);116(T-100%);131(T-100%);171(A-100%);177(T-100%);191(A-99%,G-6%,C-31%);202(A-100%);205(G-100%);221(T-100%); | G/A;C;T;T;A;T;C/G/A;A;G;T | A;C;T;T;A;T;A;A;G/C;T |
| 151 | CTATGGCTAATGGAGTGTGTGAAATG | AACAGTTTTTCGGTGAAGATATCCG | 40(A-7%,G-99%);54(T-100%);56(G-100%);57(C-97%,T-23%);58(A-84%,G-58%);63(C-100%);64(C-57%,T-84%);65(G-100%);68(A-84%,G-58%);76(C-100%);83(G-100%);89(C-100%);90(T-100%);95(A-35%,C-93%);98(C-93%,T-35%);103(C-99%,T-8%);107(C-100%);112(G-100%);113(C-100%);116(G-7%,T-99%);118(A-7%,C-99%);123(A-100%);126(C-99%);127(C-97%,T-21%);136(C-23%,A-97%);144(A-93%,T-35%);153(A-100%);167(G-8%,A-99%);168(C-99%,T-8%);173(t-100%);181(a-100%);187(t-100%);189(g-100%);190(a-100%);193(G-100%);204(T-100%);205(A-100%);210(C-100%);211(C-99%,T-8%);216(G-100%);222(G-21%,A-97%);224(T-100%); | G/A;T;G;C;A/G;C;T/C;G;G/A;C;G;C;T;C;C;C;C;G;C;G/T;C/A;A;C;C;A;A;A;A;C;T;A;T;G;A;G;T;A;C;C;G;A;T | G;T;G;C;A;C;T;G;A;C;G;C;T;C;C;C;C;G;C;T;C;A;C;C;A;A;A;A;C;T;A;T;G;A;G;T;A;C;C;G;A;T |
| 152 | AACTTCATATCGGCGGTGAGAAAAT | TAGCACCGGCCAACAGATTAATCAA | 48(C-100%);63(A-9%,G-100%);64(T-100%);68(C-100%);87(A-100%);96(A-100%);108(C-100%);111(A-100%);124(T-100%);144(A-13%,G-99%);147(A-21%,G-100%);159(G-8%,A-100%);174(A-53%,T-97%);204(C-100%);214(G-100%,T-7%);215(G-100%);216(C-100%);217(G-18%,T-100%);219(C-100%);222(G-100%); | C;G;T;C;A;A;C;A;T;G;G;A;T;C;G;G;C;T;T;G | C;G;T;C;A;A;C;A;T;A/G;G;G/A;A/T;C;T/G;G;C;G/T;C;G |
| 153 | CTTCGTAGCAGGGCTCTCATAATAT | GAATGTTTGAAGCTGCATGAACTTC | 40(C-100%);44(G-100%,T-6%);47(C-65%,T-68%);60(A-100%);63(G-100%);70(A-68%,C-65%);89(G-100%);100(T-100%);110(G-68%,A-65%);127(G-12%,A-100%);162(G-100%);170(C-6%,T-100%);198(T-99%);211(A-68%,G-65%);225(G-100%);226(C-100%);229(G-8%,A-100%);231(C-100%);234(A-100%); | C;G;C;A;G;C;G;T;A;A;G;T;T;G;G;C;A;C;A | C;G;C;A;G;C;G;T;A;A;G;T;T;G;G;C;A;C;A |
| 154 | GAGAAGACTCCGATGTAGGGATC | TAAAAGGAGCCATACAGCATCTTCA | 52(A-22%,G-100%);57(A-100%);68(C-99%,T-20%);71(A-93%,C-16%);86(C-100%);87(A-6%,G-100%);100(G-100%);105(A-100%,T-7%);106(G-95%,A-9%);110(G-100%);111(G-100%);114(G-100%);126(G-100%);129(G-100%);134(G-99%);150(C-13%,t-99%);159(a-100%);160(A-68%,c-67%);161(G-59%,c-68%);164(A-16%,T-93%);187(T-100%);204(T-100%); | G;A;C;A;C;G;G;A;G;G;G;G;G;G;G;T;A;C;C;T;T;T | G;A;C;A;C;G;G;A;G;G;G;G;G;G;G;T;A;A;G;T;T;T |
| 155 | TGCGTAAATCAGTGAAGTGAATACT | AAATTGTGGACACCCTTCTCCA | 47(C-100%);49(A-100%);75(T-100%);80(C-100%);84(A-99%,C-40%);87(A-19%,G-100%);88(C-17%,T-99%);93(A-7%,G-100%);105(G-100%);112(G-100%);113(G-100%);127(G-100%,C-20%);144(A-13%,G-100%);172(G-100%);173(G-100%,T-13%);174(A-7%,T-100%);178(A-7%,G-100%);181(G-100%,C-20%);208(G-7%,A-100%);209(A-100%,T-7%);214(G-100%);226(A-7%,G-100%);227(C-100%,T-7%);235(G-100%);238(G-100%,A-20%);241(G-100%); | C;A;T;C;C/A;G;T/C;G;G;G/A;G;C/G;G;G;T/G;T;G;C/G;A;A;G;G;C;G;G/A;G | C;A;T;C;C/A;G;C/T;G;G;G;G;C/G;G;G;G/T;T;G;C/G;A;A;G;G;C;G;A/G;G |
| 156 | ATTTATGTTCCGTGCCTGGTAATTC | GAGGTGATGAGGATAGAGACGAAC | 66(C-99%,a-31%);73(G-99%,t-31%);74(C-15%,t-99%);75(g-100%);82(G-99%,A-31%);89(G-99%,A-31%);90(G-100%);109(A-34%,G-100%);117(C-99%,T-36%);133(G-100%);156(G-10%,a-100%);158(g-100%);160(g-100%);164(a-100%);165(a-100%);180(C-8%,A-100%);181(A-100%,T-10%);195(A-100%);196(G-100%);201(C-100%); | C;G;T;G;G;G;G;G;C;G;A;G;G;A;A;A;A;A;G;C | A/C;T/G;T;G/A;A/G;G/A;G;G/A;T/C;C/G;A/G;G;G;A;A;A;T/A;A;G;C |
| 157 | TTTTTGGGTACTATAAAGGTGGGGA | GGGATAATGAGATACCCACACAACT | 59(A-14%,C-100%);65(T-100%);75(C-99%,T-31%);79(A-100%);82(C-70%,T-100%);86(G-99%,A-35%);95(C-100%,T-46%);98(G-68%,C-100%);104(G-11%,C-100%);112(G-23%,C-100%);113(G-6%,A-100%);114(A-6%,C-100%);144(C-100%,T-13%);145(A-14%,G-100%);148(C-50%,T-99%);155(C-6%,T-100%);158(G-100%);159(A-100%,T-23%);163(A-100%);166(A-100%);177(G-100%);181(C-100%);182(G-100%);185(C-36%,G-100%);187(G-50%,T-99%);189(A-100%);190(C-26%,T-100%);191(G-100%);194(C-11%,A-100%);196(C-100%,T-68%);197(C-100%,T-30%);198(G-99%,A-33%);202(G-100%);205(G-68%,A-100%);210(G-26%,A-100%);211(T-100%);213(A-70%,G-100%);215(C-99%,T-50%);224(C-100%,T-14%);233(C-94%,T-81%); | C;T;C;A;T/C;G/A;C;G/C;C;C;A;C;C;G;T/C;T;G;A;A;A;G;C;G;G;G/T;A;T;G;A;C/T;C;G;G;G/A;A;T;A/G;T/C;C;C/T | C;T;C;A;T;G;C;C;C;G/C;A;C;C;G;C/T;T/C;G;T/A;A;A;G;C;G;C/G;T/G;A;C/T;G;A;C;C;G;G;A;A/G;T;G;T/C;C;C/T |
| 158 | GCAAAGTGCAAAGTGATTATTTCA | CAGTGTTTGGAGCAATCGAAGA | 42(T-100%);48(C-11%,T-100%);49(C-100%);51(G-100%);52(A-24%,C-93%,T-64%);55(T-100%);59(G-100%);64(C-100%);67(G-100%);68(G-100%);73(C-100%,T-24%);76(A-100%);79(T-100%);81(A-100%);82(G-100%);111(C-100%);113(C-61%,T-99%);117(T-100%);125(T-100%);137(T-100%);140(C-100%);152(G-100%,T-6%);153(C-100%);159(C-100%);168(A-100%);169(A-100%);183(G-100%);184(A-100%);210(G-100%);214(C-17%,T-100%);216(G-48%,T-99%);217(C-100%,A-17%);225(T-100%);230(G-20%,C-100%);231(G-100%);235(C-5%,T-100%); | T;T;C;G;C;T;G;C;G;G;C;A;T/A;A;G;C;T;T;T;T;C;G;C;C;A;A;G;A;G;T;T;C;T;G/C;G;T | T;T;C;G;C;T;G;C;G;G;C;A;T;A;G;C;C/T;T;T;T;C;G;C;C;A;A;G;A;G;T;G/T;C;T;C;G;T |
| 159 | AAATCTCATGGATTACACAACTGCA | ACATCTATTGTCTATGCCTATCTAAGA | 38(A-13%,g-100%);54(A-13%,G-100%);57(A-100%);70(C-99%,T-7%);98(G-30%,C-100%);105(G-100%);196(T-100%);202(A-98%,G-41%);214(a-100%,T-13%); | G;G;A;C;C;G;T;A;A | G;G;A;C;C;G;T;A/G;A |
| 160 | GCTTCTAAGCCAAATTCAGAACCAT | TTGTGTGATTTTTGCTACAGAGACG | 38(G-96%,T-8%);42(C-8%,T-96%);53(A-97%);57(G-98%);78(A-8%,g-96%);80(T-100%);82(A-100%);96(C-99%);99(C-7%,T-99%);103(A-100%);105(G-52%,A-86%);150(C-99%,T-9%);153(C-95%,T-16%);156(T-99%);165(G-100%);195(G-88%,A-44%);207(G-8%,A-96%);218(A-94%,G-12%); | G;T;A;G;G;T;A;C;T;A;G/A;T/C;C/T;T;G;A/G;A;A/G | G;T;A;G;G;T;A;C;C;A;A;T;T;T;G;A;A;A |
| 161 | TCAAATCCAATTCATTCAGCACCAA | TTTCTGTCTCAGGTATCAGATTCGG | 38(G-20%,A-100%);43(G-100%);44(C-100%);53(C-5%,T-100%);59(C-92%,T-82%);78(C-100%,T-5%);86(G-91%,A-83%);95(A-100%);119(C-100%,T-55%);124(G-100%);125(C-94%,T-72%);131(A-10%,G-100%);132(G-100%);133(A-100%);139(G-100%,T-67%);158(T-100%);188(G-100%);191(T-100%);202(G-100%);203(G-100%);212(G-11%,C-100%);227(C-100%,T-15%); | A;G;C;T;C/T;C;G/A;A;C/T;G;C;G;G;A;G/T;T;G;T;G;G;C;C | A;G;C;T;T/C;C;A/G;A;C;G;C/T;G;G;A;G;T;G;T;G;G;C;C/T |
| 162 | GATCCTCTTAATTTGTGCATTCCCC | AGCTGGCTTGTTGGAATTCATTATT | 40(c-100%);41(A-20%,g-100%);54(C-16%,T-99%);77(A-100%);98(C-97%,A-33%,T-9%);120(C-17%,T-100%);128(C-100%);137(C-100%);146(C-82%,T-81%);167(C-100%); | C;G;T;A;C;T;C;C;C/T;C | C;A/G;T;A;A/C;C/T;C;C;T;C |
| 163 | CTTCCATTTCTTCAGCTCGAAAACA | GAACTGGAAACCAAAGCGCTGTT | 43(A-100%,T-15%);45(C-100%,T-19%);49(G-37%,A-100%);51(T-100%);54(G-9%,A-100%);66(C-100%);70(G-25%,A-100%);100(C-9%,T-100%);102(A-100%);109(T-100%);136(T-100%);155(A-100%,T-15%);157(G-19%,C-100%);160(A-100%);162(T-100%);163(C-100%);181(G-25%,A-100%);183(T-100%);187(A-100%,T-19%);193(A-100%);194(C-100%);195(C-6%,T-100%);205(G-15%,A-100%);214(A-19%,C-14%,G-100%); | A;C;A;T;A;C;A;T;A;T;T;A;C;A;T;C;A;T;A;A;C;T;A;G/C | T/A;C;A/G;T;A;C;A;T;C/A;T/C;T;A/T;C;G/A;C/T;C;A;C/T;A;A;C;T;G/A;G |
| 164 | GGTTTTGACGGTTTACAACTCCG | CCTCTTAATCCCCACTTCCTCTG | 37(A-7%,G-100%);61(G-17%,A-98%);73(G-100%);79(A-9%,G-98%);91(A-35%,C-100%);109(A-14%,G-100%);115(T-100%);118(A-9%,G-100%);139(G-100%);177(A-75%,G-96%);179(A-100%);185(G-100%,T-13%);186(G-5%,C-100%);190(C-68%,T-97%);191(G-100%,T-18%);224(A-100%);228(G-13%,C-100%);232(A-9%,G-98%); | G;A;G;G;C;G;T;G;G;G;A;G;C;T;G;A;C;G | G;A;G;G;C;G;T;A/G;G;G/A;G/A;G;C;C/T;G;A;C;G |
| 165 | TGGCCTCTTGTTCTATCACTTTACT | GGATCTTTCGCCATAGCTAACTGTA | 38(A-10%,G-100%);40(A-8%,G-100%);42(A-100%,T-14%);56(C-100%,T-7%);59(C-75%,G-91%);138(A-9%,G-100%);181(G-100%);188(T-100%);202(A-100%);207(G-100%);225(C-100%);229(C-33%,A-100%); | G;A/G;A;C;C/G;G;G;T;A;G;C;C/A | G;G;A;C;C/G;G;G;T;A;G;C;A |
| 166 | CTTTGGGCATAACGGAAAGCC | ACAAGGTACATCTCCTCCCTAGG | 33(A-99%);34(A-100%);35(C-100%);37(C-100%);38(A-100%);40(A-14%,T-96%);43(T-100%);44(G-100%);68(C-99%);69(G-8%,C-98%);75(T-99%);80(A-100%);86(G-100%);91(T-100%);93(C-100%);99(C-85%,G-45%);102(G-96%,C-14%);113(A-96%,G-14%);115(C-79%,T-67%);118(A-100%);121(A-99%);138(C-100%);141(C-99%);142(A-100%);145(A-100%);146(A-85%,C-45%);151(T-100%);153(A-100%);156(G-97%,A-8%);183(A-14%,T-96%);189(G-100%);196(C-100%);197(G-87%,A-44%);198(C-100%);203(A-100%);205(C-100%);208(G-98%,T-8%);210(C-100%);211(A-99%);212(C-96%,G-14%);214(G-99%);217(A-100%);221(A-100%);226(C-11%,T-97%);230(C-98%); | A;A;C;C;A;T;T;G;C;C;T;A;G;T;C;C;G;A;C;A;A;C;C;A;A;A;T;A;G;T;G;C;G;C;A;C;G;C;A;C;G;A;A;T;C | A;A;C;C;A;T;T;G;C;C;T;A;G;T;C;G;G;A;C;A;A;C;C;A;A;C;T;A;G;T;G;C;A;C;A;C;G;C;A;C;G;A;A;T;C |
| 167 | TCTGTTTATTCATTCCCTACAGGCA | GAGTGAAAACATCTAGTAGAGGGCT | 55(T-100%);64(A-100%);85(T-100%);91(A-17%,G-97%);97(G-100%);114(A-100%);123(g-100%);148(C-9%,T-97%);174(T-99%);177(T-100%);179(A-89%,T-27%);185(C-9%,T-97%);199(a-100%);213(a-100%);216(A-18%,g-94%);219(G-100%);220(T-100%);227(G-9%,C-97%);228(A-100%);229(T-99%); | T;A;T;G;G;A;G;T;T;T;A;T;A;A;G;G;T;C;A;T | T;A;T;G;G;A;G;T;T;T;A;T;A;A;A/G;G;T;C;A;T |
| 168 | CTTAAACCCTAGTACTCGTGTTTGC | TCCATAAGGAAATACTCAACCTAAGACA | 48(G-95%,A-11%);51(G-100%);59(G-95%,T-11%);60(C-10%,T-96%);61(G-95%,T-11%);64(C-11%,T-95%);66(T-100%);68(A-56%,T-88%);73(A-7%,G-100%);102(A-11%,T-95%);103(G-95%,T-11%);116(C-97%,T-33%);124(C-95%,G-11%);130(C-100%);132(A-14%,G-99%);133(A-95%,G-11%);151(g-100%,T-6%);152(g-100%);182(A-21%,C-98%);193(G-91%,A-41%);199(G-98%);200(C-100%);218(G-95%,A-11%);221(A-94%,G-14%,T-11%);229(A-100%); | A;G;T;C;T;C;T;A;G;A;T;C;G;C;G;G;G;G;-;A;G;C;A;T;A | G;G;G;T;G;T;T;T;G;T;G;C;C;C;G;A;G;G;C;G;G;C;G;A;A |
| 169 | TGTGAGTCGCCATAGATGACAATAT | CCTACAAATGGAATTCTCTAGTGCG | 40(a-100%);41(G-25%,a-94%);48(c-99%);53(c-99%);54(t-100%);58(a-100%);80(a-100%);86(C-13%,T-71%);87(A-12%,G-66%);88(C-9%,T-97%);94(A-100%);101(G-100%);104(C-98%);106(G-87%,A-15%);114(G-98%);142(c-100%);143(g-100%);145(g-100%);155(t-100%);159(t-100%);161(C-99%,T-7%);166(T-100%);169(G-88%,t-13%);171(c-100%);174(g-100%);178(g-100%);182(C-87%,t-15%);185(G-33%,c-94%);187(A-10%,g-99%);189(t-100%);195(C-15%,T-87%);208(A-100%);210(G-100%);212(C-100%);214(G-100%);216(C-99%,T-7%);217(G-87%,A-15%);223(C-90%,T-12%);224(C-88%,A-13%);227(C-100%);228(G-100%);235(A-100%); | A;A/G;C;C;T;A;A;T/-;-/G;T;A;G;C;G;G;C;G;G;T;T;C;T;G;C;G;G;C;C;G;T;T;A;G;C;G;C;G;C;C;C;G;A | A;A;C;C;T;A;A;T;A;T;A;G;C;A;G;C;G;G;T;T;C;T;T;C;G;G;T;C;G;T;C;A;G;C;G;C;A;T;A;C;G;A |
| 170 | ACCAAATCACCAAGAAAATCTTCCA | TCTCAGCTGACTCTGTAAATTTTCT | 36(A-66%,T-94%);48(A-100%,G-19%);52(C-100%,A-19%);63(C-100%,T-27%);85(C-16%,G-100%);88(A-98%,G-38%);114(A-100%,G-19%);115(A-100%,G-19%);127(C-98%,A-38%);137(G-100%);152(G-21%,A-100%);169(T-100%);184(C-100%);186(G-100%,A-19%);187(A-89%,G-51%);199(A-100%); | T;A/G;A/C;C;G;A/G/T;G/A;G/A;A/C;G;A;C/T;C;G/A;A/G;A | T;G/A;C/A;C;G/C;G/A;A/G;A/G;A/C;G;A;T;C;G/A;G;A |
| 171 | GAATCATTCCAGCCGAGTTAACTG | ACCATTACTAAGTTTCTGAGCTCTT | 48(G-100%);50(G-99%,C-23%);51(A-99%,G-23%);56(C-9%,T-100%);59(G-12%,A-100%);61(A-100%,T-16%);62(A-100%);66(C-100%);69(C-12%,T-100%);72(C-99%,A-27%);75(C-100%);78(T-100%);79(A-10%,T-100%);80(T-100%);98(G-33%,T-100%);101(G-100%);105(C-100%);128(A-100%);135(A-100%);190(T-100%);199(C-9%,A-100%);206(C-100%);210(T-100%); | G;G;A;T;A;A;A;C;T;C;C;T;T;T;T;G;C;A;A;T;A;C;T | G;G;A;T;A;A;A;C;T;C;C;T;T;T;T;G;C;A;A;T;A;C;T |
| 172 | CAAATAAGAGAATTCGATCGAGCTGA | TCATATATTAGCAAGAAATTGATGAACATCT | 46(T-100%);47(G-100%);54(T-100%);67(T-100%);92(G-91%,A-14%);93(A-100%);97(G-100%);101(G-98%);102(T-100%);111(G-97%,T-8%);112(G-81%,T-33%);113(T-100%);114(T-99%);119(G-94%,A-7%);121(A-99%);124(G-15%,T-91%);128(A-6%,G-98%);137(g-98%);146(a-100%);153(a-100%);159(G-100%);162(A-98%);168(A-8%,G-97%);170(A-100%);178(C-14%,T-92%);188(C-100%);192(G-100%);199(T-100%);206(T-100%);208(C-100%);209(A-100%);219(A-15%,T-91%);224(G-15%,A-93%); | T;G;T;T;G;A;G;G;T;G;T/G;T;T;G;A;G/T;G;G;A;A;G;A;G;A;T;C;G;T;T;C;A;A/T;G/A | T;G;T;T;G;A;G;G;T;G;G;T;T;G;A;T;G;G;A;A;G;A;G;A;T;C;G;T;T;C;A;T;G |
| 173 | TGAAGTCCAGAGATTTCTCCAACA | TCAGTTAATCAAAGATGTGTACAATCT | 35(A-61%,T-98%);41(G-100%);50(C-19%,a-100%);54(a-100%);57(C-100%);74(C-100%);87(C-100%);89(a-100%);114(C-12%,A-100%);120(C-100%,T-23%);136(C-7%,G-100%);148(G-100%);150(A-17%,C-100%);168(G-100%);183(T-100%);184(C-8%,A-100%);187(A-17%,C-12%,G-100%);189(c-100%);190(A-5%,c-100%);194(t-100%);195(G-17%,a-100%);209(G-23%,c-100%);216(A-100%);228(G-100%,T-17%);234(C-8%,t-100%); | A/T;G;A;A;C;C;C;A;A;C/T;G;G;C;G;T;A;G;C;C;T;A;C/G;A;G;T | T;G;A;A;C;C;C;A;A;C;G;G;C/A;G;T;A;G;C;C;T;G/A;C;A;G;T |
| 174 | AGGATCATCATACGTGGTATGGC | TTTTCAAGAACTCCAAAGAAATAAAAGT | 84(T-100%);96(G-11%,C-97%);134(A-11%,G-98%);135(G-100%);143(A-100%);147(G-88%,T-26%);177(C-11%,T-98%);192(G-100%); | T;C;G;G;A;T;T;G | T;C;G;G;A;G;T;G |
| 175 | TGGTATAGCCAATTGATAAAACCAACT | TGGTGATTGATTTCATTTGAATCCA | 41(A-97%,T-53%);51(G-100%);54(A-53%,G-97%);80(A-100%);87(C-100%,T-8%);92(C-100%);103(A-99%,T-19%);106(G-100%);107(C-100%);109(G-53%,A-97%);121(A-100%);125(G-59%,T-95%);159(C-53%,G-97%);194(A-99%,T-8%);214(T-100%);216(C-100%,T-10%);220(C-97%,T-53%);223(A-11%,G-99%); | A;G/IGACGTCACTTTATTGATGATATTCTAGCTACACTTTC;G;A;T/C;A/C;A/T;G/A;C;A;A;G/T;G;A;-/T;C/-;C/-;G/- | A;G;G;A;C;C;A;G;C;A;A;T;G;A;T;C;C;G |
| 176 | CCTCAAGCACAGTGTATAAATGTGT | TGAAAAGGATTGATTTTTGGATGGT | 38(G-100%);44(T-100%);66(G-7%,A-100%);67(A-17%,G-100%);71(G-100%);74(C-78%,T-96%);75(A-10%,C-100%);86(G-26%,C-100%);96(G-100%);131(T-100%);140(C-100%,T-18%);152(C-100%);161(C-100%);164(C-100%,T-7%);167(C-100%,T-5%);170(T-100%);182(C-100%,T-39%);191(C-100%);209(C-100%,T-25%);222(A-7%,C-100%);230(C-99%,T-50%);234(C-100%); | G;T;A;G;G;T/C;C;C;G;T;C;C;C;C;C;T;C/T;C;C;C;C;C | G;T;A;G/A;G;C/T;C;C/G;G;T;C;C;C;C;C;T;C/T;C;C;C;C/T;C |
| 177 | AGCAATGGATTCTTCCTCTTCTACT | CGATAGAAACTGATCAAAGTTCGGG | 38(T-100%);40(C-100%);44(A-100%);50(A-100%);55(G-12%,A-99%);58(C-22%,G-100%);64(C-11%,G-99%);78(G-100%);82(G-100%);88(G-6%,A-100%);111(G-7%,C-100%);121(C-100%);124(C-12%,T-100%);140(G-100%);141(T-100%);142(C-100%);145(A-39%,G-100%);148(C-100%,T-13%);156(C-100%);190(G-100%);211(C-100%); | T;C;A;A;A;G;G;G;G;A;C;C/T;T/C;G;T;C;G;C;C;G;C | T;C;A;A;A;G;G;G;G;G/A;C/G;C;T/C;G;T;C;G;C;C;G/C;C |
| 178 | TGTCTTCCTCACTTAAATTCTCCCT | AACATCTCTCGCCAAAAGTTTTCTT | 37(A-29%,T-89%);38(C-60%,T-57%);48(T-99%);59(C-100%);63(G-100%);82(G-99%);83(A-99%);98(C-99%);99(C-14%,A-95%);103(C-88%,T-17%);105(C-100%);119(A-99%);124(C-99%);127(C-100%);129(G-98%,A-7%);136(C-12%,T-97%);141(G-54%,A-62%);159(C-100%);160(T-100%);165(G-99%);166(G-99%);168(A-7%,T-99%);176(A-16%,G-89%);178(G-10%,T-99%);188(G-18%,C-86%);190(T-99%);191(C-100%);215(A-14%,T-95%);221(A-9%,G-99%);224(T-100%);225(G-100%);235(A-99%); | T;T;T;C;G;G;G;C;A;C;C;G;G;C;G;T;A;C;T;G;A;T;G;T;C;A;C;T;G;T;G;C | T;C;T;C;G;G;A;C;A;T;C;A;C;C;G;T;A;C;T;G;G;T;A;T;G;T;C;T;G;T;G;A |
| 179 | TCAGTTCCTAAATTCGAAAAATCGT | GAGGGTACTGGAAGGCCAC | 38(G-33%,a-86%);40();51(A-74%,C-56%);55(T-99%);60(T-100%);65(G-100%);77(C-100%);83(C-100%);93(C-99%);98(G-99%);143(C-98%,T-7%);167(A-8%,C-96%);170(G-99%);173(A-28%,G-88%);203(C-98%);206(C-100%);207(C-100%);209(C-100%);210(A-10%,G-98%);211(A-100%);224(C-100%); | A;T;C;T;T;G;C;C;C;A;T;C;G;G;C;C;C;C;G;A;C | A;-;C;T;T;G;C;C;C;G;C;A/C;G;G;C;C;C;C;A/G;A;C |
| 180 | ACCAGTCAATATTCATGATCATGTACA | CTCTCGTATTGTGGCTCTTGGTATA | 38(A-38%,T-93%);47(C-100%);59(C-100%);65(C-17%,T-97%);66(C-97%,T-19%);70(T-100%);74(A-100%);80(G-100%);83(A-17%,G-97%);86(C-24%,T-97%);89(C-100%);98(A-6%,G-99%);100(G-100%);108(G-100%);112(G-100%);114(C-100%);119(T-100%);120(C-100%);153(A-100%);155(C-11%,A-97%);158(G-100%);161(G-16%,A-98%);164(A-100%);167(A-19%,G-97%);168(G-100%);169(T-100%);172(C-100%);176(G-99%);180(G-17%,T-97%);181(C-97%,T-19%);184(A-29%,C-90%);195(G-19%,C-97%);203(A-5%,C-99%);205(A-100%); | T;C;C;T;C;T;A;G;G;T;C;G;G;G;G;C;T;C;A;A/C;G;A;A;G;G;T;C;G;T;C;C/A;C;C;A | T/A;C;C;C/T;C;T;A;G;G/A;T;C;G;G;G;G;C;T;C;A;A;G;A;A;G;G;T;C;G;G/T;C;C;C;C;A |
| 181 | ACGTACAAACAAAGAAAAATTCAATGCT | TGATTCCTATTTTGCTTAATTGTGAATT | 41(G-86%,C-65%);57(A-100%);59(A-100%);62(A-99%,T-7%);64(T-100%);70(G-100%);98(C-100%);99(C-99%,T-7%);127(A-100%);140(T-100%);154(G-100%);155(G-100%);161(C-15%,T-99%);165(T-100%);166(T-100%);168(C-97%,T-34%);189(C-99%);193(A-100%);194(C-100%); | G;A;A;A;T;G;C;C;A;T;G;G;T;T;T;C;C;A;C | G;A;A;A;T;G;C;C;A;T;G;G;T;T;T;C;C;A;C |
| 182 | TTTTGTTGACCCCGAATCTTTGTTT | CTAGTGGCCAAGTTTCCCACTATAA | 37(G-19%,A-100%);39(C-100%);40(C-33%,T-100%);45(A-10%,G-100%);66(G-100%,A-18%);70(G-100%,A-18%);83(G-10%,A-100%);88(C-100%,G-18%);92(C-19%,T-100%);97(T-100%);103(T-100%);107(C-18%,T-100%);130(G-100%);149(A-100%);156(C-100%,T-10%);159(T-100%);165(C-100%,G-18%);174(C-33%,T-100%);188(A-19%,C-100%);201(G-100%);202(A-100%,C-33%);216(G-96%,A-33%);237(C-100%); | A;C;C/T;G;G/A;G/A;A;G/C;T;T;T;C/T;G;A;C;T;C/G;T/C;C;G;C/A;G/A;C | A/G;C;C/T;G;G;G;G/A;C;C/T;T;T;T;G;A;T/C;T;C;T/C;A/C;G;A/C;A/G;C |
| 183 | TCGAAGGTTTAAGAGATCATATTGGT | TATTTTTAACGGTTCAAGGCTACCC | 55(A-7%,G-100%);74(G-12%,T-100%);82(A-100%);93(C-100%);94(T-100%);117(A-100%);119(G-100%);146(C-100%);147(A-15%,T-100%);153(G-64%,T-98%);159(G-100%);171(G-100%,A-23%);175(G-100%,T-6%);176(G-6%,C-100%);208(T-100%);209(A-7%,G-100%);217(A-100%);218(C-100%); | G;T;A;C;T;A;G;C;T;T/G;G;G;G;C;T;G;A;C | G/A;T;A;C;T;A;G;C;T;G/T;G;A/G;G;C;T;A/G;A;C |
| 184 | GGAGCTACGGTAATTAGGCCTATTA | TGGTTTGTAGAAGCAGAGAACTCT | 39(G-100%);48(C-100%);54(G-100%);63(C-100%);66(A-22%,G-100%);72(A-23%,T-100%);73(G-9%,C-100%);83(T-100%);97(C-100%);102(G-100%);123(C-23%,A-100%);125(G-23%,C-100%);135(A-71%,G-84%);144(C-87%,T-70%);145(T-100%);152(A-9%,G-100%);153(C-31%,A-98%);159(A-100%);187(G-100%);192(A-100%);193(G-100%);225(A-100%,T-23%);238(C-100%); | G;C;G;C;G;T;C;T;C;G;A;C;G;C;T;G;A;A;G;A;G;A;C | G;C;G;C;A/G;A/T;C;T;C;G;C/A;G/C;G;C;T;G;A;A;G;A;G;T/A;C |
| 185 | CTCTTCAGGGTTCAAAATGTGACAA | TCTTATCGCTTTCAGAGGCTATGTT | 47(t-100%);58(t-100%);99(A-8%,G-100%);103(C-12%,T-100%);109(A-100%);115(G-100%,A-25%);118(G-83%,A-92%);130(G-100%);139(C-16%,T-100%);144(T-100%);146(A-100%);148(G-16%,A-100%);154(G-86%,A-93%);158(C-20%,T-100%);162(T-100%);175(G-100%);178(C-100%,T-65%);186(A-100%);196(C-20%,T-100%);199(C-100%,T-28%);201(G-100%); | T;T;G;T;A;G/A;G/A;G;T;T/A;A;A;G/A;T;T;G;C/T;A;T;C/T;G/A | T;T;G;T;A;G/A;G/A;A/G;T;T;A;A;A/G;T/C;T;G;C/T;A;T/C;C;G |
| 186 | TCGGTTGATATTTTGTACCAAAGCT | GTTTGGTAATTATCCCGTCATTCCC | 38(A-100%);39(G-100%,T-15%);40(A-100%);41(G-100%);48(G-99%,A-42%);52(T-100%);53(G-91%,A-83%);56(A-10%,C-100%);69(G-99%,A-44%);77(G-100%);98(A-100%);101(G-91%,T-83%);124(A-12%,T-100%);130(C-100%);131(C-100%);141(A-99%,G-42%);166(A-7%,G-100%);168(C-10%,A-100%);172(A-44%,T-99%);179(A-100%);205(C-99%,A-42%);206(C-99%,G-42%);213(A-100%);217(G-9%,A-100%);226(A-56%,G-98%); | A;G;A;G;G;T;A/G;C;G;G;A;G/T;T;C;C;A;G;A;T;A;C;C;A;A;A/G | A;G/T;G/A;A/G;G/A;T/C;A/G;C;A/G;G/C;G/A;T/G;T;A/C;C/T;G/A;G;A;T/A;A;C/A;G/C;A/G;A;G/A |
| 187 | GGATCGATCTGCCAACCAACTC | GTTGAACAAAGTGATGTGATGCAAG | 34(T-100%);36(A-100%);39(C-100%);43(T-100%);69(A-100%);94(T-100%);96(G-100%);102(A-20%,T-100%);109(T-100%);123(G-100%);135(G-100%);155(G-100%);162(C-99%,T-8%);170(A-7%,T-100%);172(G-100%,T-7%);179(A-100%,G-50%);181(G-16%,C-100%);185(T-100%);188(A-8%,G-100%);194(C-100%,T-17%);202(C-100%,A-27%);222(C-22%,G-100%);229(T-100%); | T;A;C;T;A;T;G;T;T;G;G;G;C;T;G;A/G;C;T;G;C;A/C;G;T | T;A;C;T;A;C/T;G;T;T;G;G;G;C;T/A;G/T;G/A;C/G;T;G;C/T;C/T;G;T |
| 188 | TGTTGCACTTGAATTACAAAGAGTG | TTCTTGAATTAATTTCTCTTGTACCGA | 37(A-100%,G-15%);43(G-100%);53(A-37%,G-97%,T-28%);57(C-100%,T-8%);59(G-100%,T-9%);61(A-100%);64(A-8%,g-100%);66(c-100%,T-9%);82(c-85%,T-79%);83(A-7%,g-100%);86(G-100%);87(C-28%,T-98%);89(T-100%);92(C-100%);93(C-100%,T-8%);96(A-100%,T-9%);97(A-18%,T-100%);98(A-100%,G-18%);104(C-100%,T-9%);105(C-100%,T-24%);106(G-28%,A-100%);112(G-100%);121(G-100%);122(C-100%,T-9%);125(G-99%,T-24%);141(T-100%);142(C-100%);143(G-100%,A-18%);145(C-27%,T-100%);147(C-24%,T-99%);153(A-6%,G-100%);154(C-100%,T-6%);155(A-99%,G-16%,T-10%);156(G-100%);164(C-100%,T-9%);165(C-8%,T-100%);183(C-100%,T-9%);184(G-24%,T-99%);191(G-78%,A-86%);192(C-21%,G-57%,A-86%);194(G-100%);195(G-100%,C-9%);205(G-100%);206(G-100%);208(C-85%,T-82%);210(A-11%,T-100%);211(A-76%,T-87%);212(C-100%);213(C-100%,T-14%);215(A-100%);218(G-100%); | A;G;A;C;G;A;G;C;C;G;G;C;T;C;C;A;T;A;C;C;A;G;G;C;G;T;C;G;T;C;G;C;A;G;C;T;C;G;A;A;G;G;G;G;C;T;A;C;C;A;G | A;G;G;C;G;A;G;C;T;G;G;T;T;C;C;A;T;A;C;C;A;G;G;C;G;T;C;G;T;T;G;C;A;G;C;T;C;T;G;G;G;G;G;G;T;T;T;C;C;A;G |
| 189 | GATGTTATCCAGCCACGAAAGC | CTGTTCAACATCCCTTCCATCCAT | 37(A-96%,G-59%);38(C-100%);43(A-100%);46(A-100%);66(C-100%);85(C-100%);91(G-6%,A-100%);103(A-100%);118(A-100%);129(T-100%);138(G-100%);154(A-100%);158(C-100%);169(G-100%);174(C-100%);187(C-7%,T-100%);198(C-18%,T-99%);199(G-100%);207(T-100%);211(C-100%);212(T-100%);217(A-100%);220(C-10%,T-100%); | A/G;C;A;A;C;C;A;A;A;T;G;A;C/T;G;C;T;T;G;T;C;T;A;T | A;C;A;A;C;C;A;A;A;T;G;A;C;G;C;T;T;G;T;C;T;A;T |
| 190 | CACCCTTTTCTTTGAAAGAAGGTGG | AATGAATGAATCGAACACGAGCTA | 46(G-100%);58(T-100%);59(C-13%,T-99%);87(C-100%);132(A-13%,T-100%);152(A-100%);182(C-99%,T-14%);183(A-100%);185(C-57%,G-94%);188(C-85%,T-87%);217(A-100%);219(C-100%,T-5%);226(A-100%);229(C-98%,T-5%);230(G-97%,A-49%);231(A-15%,G-99%); | G/A;C/T;T;C;T;A;C/T;A;G;C/T;A;C;A/G;C;A/G;G | G;T;T;C;T;A;C;A;C;T;A;C;A;C;G;G |
| 191 | CTTTCGATGAGGTGAAGAGAAATGG | TGTAGGAGATAACATCAGCTTCCAA | 62(C-100%,T-7%);81(G-100%);82(C-100%);92(T-100%);104(G-100%);122(T-100%);126(A-100%);128(C-100%);129(A-24%,G-100%);134(G-100%,T-6%);144(C-100%);155(C-13%,T-99%);169(A-100%);179(A-37%,G-99%);185(C-99%,T-14%);189(G-100%);194(C-14%,T-100%);203(A-13%,G-99%);210(G-100%);212(T-100%);218(G-6%,A-100%);219(G-10%,A-100%); | C;G;C;T;G;T;A;C;A/G;T/G;C;T;A;G;C;G;T;G;G;T;A;A | C;G;C;T;G;T;A;C;G;G;C;T/C;A;G;T/C;G;T;G/A;G;T;A;A/G |
| 192 | CCAACCAACAAAATACATCCTGTCA | GCTAGTGCGGCAATAAATTGAAATC | 39(C-100%);45(G-100%);47(A-11%,g-100%);49(c-100%);51(a-100%);70(A-100%);73(G-100%);74(G-8%,t-100%);75(A-7%,g-100%);78(a-100%);80(a-100%);83(c-100%);85(a-100%);89(t-100%);91(t-100%);94(C-100%);99(A-100%);136(G-100%);138(C-100%);140(G-100%);142(A-100%);145(T-100%);146(C-5%,A-100%);150(A-100%);157(c-100%);165(G-99%,a-44%);168(a-100%);169(a-100%);175(A-10%,G-100%);185(A-14%,T-100%);187(A-100%);192(C-35%,T-100%);205(A-100%,G-15%);207(C-99%,G-36%,T-15%);210(A-100%,T-35%);211(G-100%);215(C-100%);219(C-100%); | C;G;G;C;A;A;G;T;G;A;A;C;A;T;T;C;A;G;C;G;A;T;A;A;C;G/A;A;A;G;A/T;A;T;A/G;C/T;A;G;C;C | C;G;G;C;A;A;G;T;G;A;A;C;A;T;T;C;A;G;C;G;A;T;A;A;C;G;A;A;G;T;A;T;A;C;A;G;C;C |
| 193 | TCAAAAGTCCAACAACCCAAATCAA | AGACTGATCTTTCCTTTCTGTTCGA | 46(T-100%);47(G-100%);49(A-100%);52(G-100%);56(A-22%,T-100%);59(G-100%,A-21%);64(G-100%);76(T-100%);81(C-100%);85(A-100%,T-22%);90(A-16%,G-100%);94(A-100%,G-21%);121(T-100%);168(T-100%);192(C-100%);211(C-13%,G-100%,A-22%);217(G-9%,A-100%);218(A-18%,C-100%);225(A-100%);226(A-100%); | T;G;A;G;T;G;G;T;C;A;G/A;A;T;T;C;G;A;C;A;T/A | C/T;G;C/A;G;T/A;G;G;T;C;A/T;G;A;T;T;C/G;G/A;A;A/C;A;A |
| 194 | TATTTGGAGCGGGACAAAATAATTG | GCGGTCTTAAAAAGTGTTTGGTTTC | 71(T-100%);72(A-100%);75(A-8%,C-98%);108(A-100%);125(A-100%);162(C-9%,T-99%);177(T-100%);191(C-99%,T-14%);198(G-98%);210(T-100%);213(T-100%);224(G-98%);228(T-100%); | ND | T;A;C;A;A;C;T;C;G;T;T;G;T |
| 195 | TAAAAGTTTGTCAATTGTGGCTTGC | GCTATTACATGGTGATGCTGGTCTA | 68(A-100%);70(A-53%,G-99%);75(G-100%);77(A-100%);85(A-100%);87(A-100%);88(G-100%);90(C-99%,T-50%);91(A-100%);99(A-12%,G-100%);108(C-16%,T-100%);114(A-100%);115(T-100%);116(C-100%);123(C-13%,T-100%);133(A-65%,C-99%);134(A-96%,G-48%,T-55%);135(A-14%,T-100%);139(C-100%);140(C-100%,T-27%);146(T-100%);147(C-14%,A-100%);149(T-100%);152(C-100%);173(A-11%,g-100%);177(c-100%);183(C-100%);187(A-14%,G-100%);190(C-100%);191(A-96%,G-82%);199(C-100%);209(C-100%);220(C-55%,T-99%); | A;G/A;G;A;A;A;G;C/T;A;G;T;A;T;C;C/T;A/C;A/T;T;C;C;T;A;T;C;G;C;C;G;C;G/A;C;C;C/T | A;G;G;A;A;A;G;C;A/G;G;T;A;T;C;T;A/C;G/A;A/T;C;C;T;C/A;T;C;A/G;C;C;G/A;C;A/G;C;C;T |
| 196 | CTGGAGGTTATGAAAGAGCCTTTCT | AATTCCAAAAGCTCCATCTCCAATC | 57(G-100%);71(G-100%);78(A-17%,G-100%);95(C-6%,A-100%);110(C-13%,T-100%);120(G-100%);121(A-15%,G-100%);129(G-100%,T-8%);131(G-100%);132(G-100%);144(T-100%);161(C-27%,G-100%);174(C-100%);182(T-100%);189(A-100%);192(G-100%); | G/C;G;G;A;T;G/A;G;G;G;G;T;G;C;T;A;G | G;G;G;A/C;T;G;G;G;A/G;G/A;T;C/G;C;T;A;G |
| 197 | ACGTAAAAGTTTTTGACCTGCAA | TCAGCTACAAAGGACAGCTATCTC | 37(A-39%,T-100%);44(A-100%,T-10%);47(G-7%,A-100%);48(C-100%);51(A-100%,T-14%);52(A-100%);56(C-99%,T-29%);61(A-100%);62(A-8%,T-100%);65(T-100%);69(T-100%);71(G-8%,T-100%);74(C-100%);76(A-20%,G-100%);77(A-26%,T-99%);78(A-100%,T-6%);81(A-38%,G-99%);88(G-95%,A-76%);107(G-100%);176(C-24%,T-100%);185(T-100%);190(G-33%,T-100%);200(G-29%,C-100%);206(C-100%);235(G-99%,T-26%);236(C-24%,A-100%);237(G-100%); | T;T/A;A;C;A;A;C;A;T;T;T;T;C;G;T;A;A/G;G/A;G;T;T;T;C;C;G;A;G | A/T;A;A;C;A/T;A;C;A;T/A;T;T;G/T;C;G;T;A;G;A/G;G;T;T;G/T;C;C;G;A;G |
| 198 | GAGCTTGATAAAAGATCGGTTTAATTT | TACCTGCAGCATTTAAGACTTTCAC | 42(A-100%);44(A-100%);62(G-100%);63(T-100%);68(C-8%,T-99%);76(G-99%,A-8%);112(T-100%);118(C-99%);163(C-100%);176(G-8%,T-99%);198(G-100%);203(C-95%,T-45%); | ND | A;A;G;T;T;G;T;C;C;T;G;C |
| 199 | TAGATCGCCACAGCCCTTTTAG | CCCACTGTAGTAATTGTAGTTTGGC | 37(G-17%,T-100%);41(C-93%,T-58%);44(G-100%);48(G-100%,T-8%);50(G-100%,T-13%);52(A-6%,G-100%,T-8%);54(A-100%,G-14%);63(A-100%);64(G-6%,A-100%);75(C-100%,T-6%);83(A-100%);89(C-100%,T-8%);94(G-100%);95(T-100%);98(C-100%);105(T-100%);109(G-6%,A-100%);112(G-14%,A-100%);118(A-100%);122(A-5%,G-100%);125(C-100%,T-9%);126(C-100%);131(A-100%);139(C-8%,A-100%);140(G-100%);147(T-100%);161(C-100%);166(G-6%,A-100%);167(A-100%);175(G-100%);176(T-100%);182(T-100%);185(C-100%);187(G-100%);193(A-13%,G-100%);198(G-100%,T-10%);199(C-100%,T-10%);204(A-100%);209(G-100%);213(C-17%,T-100%);214(C-100%);217(A-100%);221(C-14%,T-100%);223(A-100%);226(C-24%,G-100%);227(C-14%,A-100%);233(C-100%,T-25%);240(G-100%); | T;T;G;G;G;G;A;A;A;C;A;C;G;T;C;A/T;A;A;A;G;C;C;A;A;G;T;C;A;A;A/G;T;T;C/T;G;G;G;C;A;G;T/C;C;A;T;A;G/C;A;C/T;G | G/T;C/T;G;G;G/T;A/G;G/A;A;G/A;T/C;A;C;G;T;C;T;A;G/A;A;G;C;C;A;A;G;T;C;A/G;A;G;T;T;C;G;G;G/T;C/T;A;G;T/C;C;A;T/C;A;G;C/A;C;G |
| 200 | ACCTTGCCTTTTATATACATCAAACA | ATGAGGTCCTATGTACATGCATGTT | 65(C-100%,T-11%);105(G-100%);125(G-100%);126(C-100%);129(T-100%);138(T-100%);160(C-100%);162(G-100%);164(G-100%);167(C-100%);203(C-100%);206(A-100%);209(G-100%);216(A-14%,G-100%);222(G-100%,A-15%); | C/T;G;G;C;T;T;C;G;G;A/C;C;A;G;G;A/G | T/C;G;G;C;T;T;C;G;G;C;C;A;G;A/G;A/G |
| 201 | TTTGTTGCCTTGCTGTGCTAC | TGACAATTAGAAAATAAATATTATTGCTGAATTCA | 35(T-100%);36(C-100%);42(T-100%);43(C-17%,T-98%);59(C-98%,T-22%);60(G-99%);61(C-99%);63(C-6%,T-99%);65(C-98%,T-14%);67(C-100%,T-7%);68(A-14%,G-99%);75(A-13%,T-99%);78(C-32%,T-99%);99(A-100%);105(A-98%,C-17%);107(A-6%,G-100%);113(C-58%,T-94%);122(A-100%);131(A-98%,C-17%);136(G-100%);137(C-100%);139(A-98%,G-17%);149(G-100%);154(C-100%);155(G-47%,C-96%);156(T-100%);161(G-100%);177(A-8%,G-100%);180(T-100%);181(C-22%,G-99%);184(T-100%);204(G-98%,A-17%);215(A-100%); | ND | T;C;T;T;C;G;C;T;C;C;G;T;T;A;A;G;T;A;A;G;C;A;G;C;C;T;G;G;T;G;T;G;A |
| 202 | TGCTTTGACCTTTTTATTTCAGCAAC | CTCTGACGAATTTAATCACCAAGCA | 41(T-100%);43(G-100%);48(C-100%);52(G-21%,T-99%);59(C-100%,T-33%);66(C-21%,T-99%);67(T-100%);120(G-100%);143(G-100%);147(A-100%);190(A-99%,G-22%);198(A-99%,G-22%);208(T-100%);210(C-100%);223(A-22%,T-99%); | T;G/A;C;T/G;C;T/C;T;G/T;G;A;A/G;A/G;T;C;A/T | T;G;C;G/T;C;T/C;T;G;G;A;A/G;G/A;T;C;A/T |
| 203 | TCCTGTTTTATTATGTATAGAATTTCTTTGTAA | AAAAATCCTCTCTTCATTGATCCATAT | 51(a-10%,T-99%);59(C-10%,T-99%);95(T-100%);143(G-100%);158(A-100%);173(G-64%,A-92%);179(T-100%);235(a-100%); | ND | ND |
| 204 | ATCCTCGCTTTCAAATACAATCGTC | TCCCGTGATCTCCTCTTCATATTTG | 38(G-99%);39(A-6%,C-97%);40(C-99%,T-5%);41(C-24%,G-95%);42(G-88%,A-49%);46(C-100%);53(C-100%);71(C-99%);83(C-100%);86(A-100%);88(G-100%);91(A-93%,T-29%);101(C-97%);118(A-100%);120(T-99%);122(G-99%);131(G-100%);133(C-100%);135(A-21%,G-97%);136(C-5%,A-100%);138(T-100%);140(G-98%,T-7%);167(A-11%,G-98%);182(G-5%,A-100%);200(G-91%,A-44%);201(A-29%,G-96%);203(C-97%,A-19%);205(C-100%);206(G-97%,A-8%);231(A-99%); | G;C/T;C;G;A;C;C;C;A/C;A;G;A;C;A/G;T;G;G;A/C;G;A;T;T/G;G;A;A;G;A;C;G;A | G;C;C;G;G;C;C;C;C;A;G;A;C;A;T;G;G;C;G;A;T;G;G;A;G;G;C;C;G;A |
| 205 | GGCGACATCCATAGGGTTGTATATT | CAATATGATGGCTAATCGACTCTCG | 42(G-22%,A-95%);47(C-97%,T-12%);67(A-9%,G-98%);77(C-25%,T-95%);78(C-100%);82(A-93%,G-37%);88(G-100%);98(G-100%);104(G-94%,A-25%);111(A-93%,G-37%);116(A-93%,G-37%);119(C-99%,T-14%);120(G-100%);165(C-14%,T-99%);171(A-12%,G-97%);201(C-97%,T-12%);203(G-100%);205(A-100%);209(G-14%,C-99%);211(T-100%);213(A-100%);221(C-92%,A-25%);228(A-100%); | A;C;G;T;C;A;G;G;G;A;A;C;G;T;G;C;G;A;C;T;A;C;A | A/G;C;G;C/T;C;G/A;G;G;A/G;A/G;A/G;C;G;T;G;C;G;A;C;T;A;C/A;A |
| 206 | AGATATTCTGCGATGTGTTGCAAAA | GTTTTCTGCTTCTGCTTTGACAATG | 38(c-100%,T-11%);75(C-100%);83(C-21%,G-100%);88(A-100%);92(C-100%,T-6%);100(C-29%,G-98%);106(C-100%);107(A-100%);140(A-100%);157(G-100%,T-5%);160(C-6%,A-98%);166(G-100%);168(A-15%,G-100%);180(G-100%);181(C-100%,T-11%);186(G-100%);187(A-100%);189(C-100%);192(A-11%,T-100%);215(C-100%,T-22%);220(A-12%,T-100%); | C;C;G;A;C;G;C;A;A;G;A;G;G;G;C;G;A;C;T;C;T | C;C;G/C;A;C;G;C;A;A;G;A;G;G/A;G;C;G;A;C;T;C/T;A/T |
| 207 | AGCACTATTTCTTTTCAGCTGGAAC | CCGGATCAGAACATTTCAGAACTTT | 36(C-7%,G-94%,a-24%);38(G-9%,a-98%);48(a-100%);54(A-13%,g-100%);89(C-95%,t-18%);101(G-6%,A-100%);113(G-13%,T-100%);121(C-100%);122(C-11%,G-100%);130(T-100%);133(C-100%);153(C-5%,G-10%,T-100%);154(A-13%,G-100%);167(A-100%);175(G-100%);179(C-100%);182(C-100%,T-13%);184(A-100%);185(C-100%,T-11%);186(C-11%,A-100%);187(C-21%,T-98%);188(G-100%);190(A-100%);191(C-100%);192(A-17%,C-28%,T-94%);193(G-73%,A-92%);194(C-6%,T-99%);203(C-100%,T-13%); | A;A;A;G;T;A;T;C;G;T;C;T;G;A;G;C;C;A;C;A;C;G;A;C;T;A;T;C | G/C;A;A;G/A;C;A;T/G;C;G/-;T;C;T/G;G/A;A;G;C;T/C;A/-;C/T;A/C;C/T;G;A;C;C/T;A;T;C/T |
| 208 | CGAAGCAGTCGGAAAGAAAAC | AGTTTTTGAAGAAGAAGGCGAAAGA | 32(A-100%);38(C-100%,T-7%);39(G-100%);50(A-100%);51(T-100%);57(C-100%,A-21%);59(A-100%,T-11%);61(C-100%);69(G-100%);77(C-100%);78(A-8%,G-100%);90(G-100%);91(C-100%,A-39%);98(G-100%,T-23%);105(A-100%);120(A-100%);123(C-37%,G-100%);127(C-100%);150(C-100%);159(C-100%,T-32%);162(G-100%);165(C-100%,T-10%);175(C-100%);188(G-100%);189(G-100%);198(C-23%,G-100%);201(A-100%);204(A-100%,T-21%);207(C-100%);210(G-100%); | A;C;G;A;T;C/A;A;C;G;C;G;G;C/A;T/G;A;A;C/G;C;C;C/T;G;C;C;G;G;G;A;A;C;G | A;C;G;A;T;A/C;T/A;C;G;C;G;G/C;A/C;G/T;A;A;G;C;C;C;G;C;C;G;G;G;A;T/A;C;G |
| 209 | TACAAGATGCGGATCTTATGCAAAC | CACTTTAACACCAGGTGCATCTAAG | 39(g-100%);138(A-35%,G-100%);186(T-100%);217(T-100%); | G;G;T;T | G;G;T;T |
| 210 | AAAAAGGGCAGGATGAAACGGAATT | GGGAGGTAAGGGGATTACAGATCTA | 38(g-100%,T-23%);41(C-17%,T-100%);48(C-12%,T-100%);54(C-100%);57(C-100%,T-12%);67(C-100%);74(G-32%,A-100%);108(C-100%);143(G-21%,A-100%);184(A-100%);190(A-57%,T-100%); | G/T;C/T;T;C;C;C;A;C;A;A;T/A | G;T;C/T;C;T/C;C;A;C;G/A;A;T/A |
| 211 | AGATGATGACATGACCAACACTCAT | AATTCTGGTTGCTTTTTCTGGTCAT | 38(C-8%,T-100%);41(G-8%,T-100%);75(C-100%,T-6%);80(G-100%);89(C-100%);94(A-100%,T-8%);101(G-100%,A-39%);103(A-13%,C-100%);104(G-100%);107(A-100%,G-61%);145(C-100%);149(A-100%);153(C-100%);156(A-52%,G-100%);160(C-100%);161(T-100%);167(C-100%);171(A-11%,T-100%);173(G-100%);174(C-100%);179(C-6%,T-100%);183(C-100%);199(A-6%,T-100%);206(C-100%); | T;T;C;G;C;A;G/A;C;G;A;C;A;C;G;C;T;C;T;G;C;T;C;T;C | T;T;C;G;C;A;G/A;C;G;G/A;C;A;C;G/A;C;T;C;A/T;G;C;T;C;T;C |
| 212 | CTACACTTAGCACGCTCATCTTGAT | GATCCACTAGTGCAGCCTCAATA | 37(A-22%,G-91%);38(A-21%,G-95%);40(G-100%);42(G-8%,A-99%);46(C-98%);52(C-99%,T-8%);53(T-100%);58(G-100%);61(G-100%);64(C-100%);71(C-9%,T-99%);72(C-77%,T-53%);76(A-22%,T-95%);77(C-100%);79(A-100%);82(C-100%);83(G-100%);88(A-7%,C-99%);92(G-100%);101(C-99%);107(C-99%);112(G-33%,T-86%);118(A-25%,T-91%);120(T-100%);121(G-100%);122(G-53%,A-77%);126(C-100%);129(C-99%,T-8%);132(G-100%);134(G-100%);141(G-100%);146(C-99%,T-6%);156(a-100%);157(t-100%);158(a-100%);160(C-87%,a-22%,T-24%);165(c-100%);168(t-100%);170(A-100%);172(A-100%);174(A-100%);179(A-7%,G-99%);180(T-100%);187(C-100%);189(A-100%);190(C-88%,T-34%);192(A-63%,G-68%);193(C-96%,T-13%);197(T-100%);198(T-100%);200(C-100%);201(T-100%);202(A-34%,G-88%);210(G-95%,A-21%);213(C-99%,T-7%);219(C-99%,T-8%);227(C-100%);228(A-34%,C-16%,T-81%);229(G-100%);231(C-99%,T-8%);232(G-100%);236(T-100%); | G;G;G;A;C;C;T;G;G;C;T;C;T;C;A;C;G;C;G;C;C;T;T;T;G;A;C;C;G;G;G;C;A;T;A;C/A;C;T;A;A;A;G;T;C;A;T;G;C;T;T;C;T;A;G;C;C;C;A;G;C;G;T | G;G/A;G;A;C;T/C;T;G;G;C;T;C/T;A/T;C;A;C;G;C/A;G;C/-;C/-;-/T;T;T;G;A/G;C;C/T;G;G;G;C;A;T;A;A/T;C;T;A;A;A;G;T;C;A;C;A/G;C;T;T;C;T;G;G/A;C;C/T;C;T;G;C;G;T |
| 213 | CTGAGCAGATATCTGAGAAGGAGAC | TGCATGACTGAAGTAAGAAGAGAGA | 57(G-100%);62(T-100%);72(C-25%,T-100%);89(C-5%,G-99%);90(C-100%);101(A-11%,G-100%);102(T-100%);139(G-100%);143(G-5%,A-99%);144(T-100%);156(G-11%,A-100%);164(T-100%);173(T-100%);186(A-19%,G-100%);188(A-100%);208(G-78%,T-88%);227(C-100%,T-16%); | G;T;T;G;C;G;T;G;A;T;A;T;T;G;A;G/T;C | G;T;T/C;G;C;A/G;T;G;A;T;A/G;T;T;G;A;G;C |
| 214 | CTGCAACCAGATCCAATCACATATG | CAAAAACTTTGCTGCCATTCTTGTT | 36(A-100%);39(C-100%,T-11%);40(G-100%);42(G-83%,T-92%);48(A-7%,G-100%);53(T-100%);64(C-100%);65(G-21%,A-100%);72(T-100%);92(C-9%,T-100%);103(C-100%,T-21%);110(G-100%);111(A-100%);122(T-100%);135(T-100%);141(C-7%,T-100%);144(C-12%,T-100%);150(C-17%,T-100%);154(A-5%,C-100%);162(A-100%);177(A-5%,G-100%);180(A-10%,G-100%);183(C-100%,T-10%);184(G-100%);186(G-100%);192(A-21%,T-100%);197(A-100%);203(A-100%);216(C-100%);231(G-100%);237(A-100%); | A;T/C;G;G/T;G;T;C;A;T;T;C/T;G;A;T;T;T;C/T;T;C;A;G;G;C;T/G;G;T/A;A;A;C;G;A | A;C;G;G/T;G;T;C;A;T;T;C;G;A;T;T;T;T;T/C;C;A;G;G;C;G;G;T;A;A;C;G;A |
| 215 | TGGGAAATTGGTGTAAGTTTGACAA | CACAAATGGGTTCCACATATAGCAA | 43(G-100%);44(C-13%,T-99%);64(G-100%);65(A-13%,G-100%);68(A-10%,T-100%);72(C-100%);74(A-100%);88(G-25%,T-99%);97(A-100%,T-10%);99(G-100%);105(A-100%);107(G-100%);108(C-10%,T-100%);131(G-100%);133(G-30%,A-98%);136(C-16%,T-100%);140(G-100%);155(A-100%,T-15%);172(C-13%,G-99%,a-13%);189(A-100%,T-16%);190(G-98%,A-37%);194(G-100%);198(C-13%,T-100%);223(G-100%);224(C-100%);227(A-11%,G-99%);229(G-66%,A-87%);230(C-100%); | G;T/C;G;G;T;C;A;T/G;A;G;A;G;T;G;A;T;G;A;G/A;A;A/G;G;T;G;C;G;A;C | G/A;T;G;G/A;T/A;C;A;G/T;T/A;G;A;G;C/T;G;A;T;A/G;A;G/C;A;G/A;G;T/C;G;C;G;A/G;C/A |
| 216 | CTGCGCGCAACTTCGTTTAC | CCAGCATATGAGGTTTTGATTAGAGA | 32(T-100%);57(G-100%);61(G-100%);72(C-100%);126(T-100%);159(A-100%);180(A-100%);210(A-97%,G-39%);214(T-100%);218(C-68%,T-89%);228(C-95%,T-56%);234(C-89%,T-68%); | T;G;G;C;T;A;A;A;T;C;C;T | T;G;G;C;T;A;A;A/G;T;C/T;C;T/C |
| 217 | TGTTGAAGAAATGGAGGGATTCCTA | ACTGCAGTAATATCGAGAATTCATCTG | 46(A-100%);47(C-100%);65(t-100%);72(C-100%);90(T-100%);91(C-100%);98(T-100%);103(T-100%);116(C-100%);121(C-99%,T-14%);145(A-99%,T-15%);162(C-15%,T-99%);163(C-99%,T-10%);173(T-100%);183(G-70%,A-82%);188(C-8%,T-100%);198(G-100%); | A;C;T;C;T;C;T;T;C;C;A;T;C;T;G;T;G | A;C;T;C;T;C;T;T;C;C;T;C;C;T;A;T;G |
| 218 | GACCTTGCGTGATTCATTGAAGAAG | ACTGAAATAGATACTGACAAGCAAGC | 81(A-100%);91(T-100%);115(T-100%);151(C-100%);159(C-100%);164(C-6%,T-100%);173(C-100%,T-13%);184(T-100%);185(G-100%);194(A-100%,T-13%);198(C-100%);214(C-100%,T-7%);224(A-100%);225(T-100%); | A;T;T/C;C;C;T;C;T;G;A;C;C;A;T | A;T;T;C;C;T;T/C;T;G;A/T;C;C;A;T |
| 219 | AGGAGACTATTTTGGCACTTTACAC | GGTGGTACATATGTAAATGCCCCTAAT | 75(C-11%,G-100%);77(C-11%,G-100%);96(C-100%,T-11%);108(G-99%,A-12%);111(C-100%);114(G-6%,A-100%);120(T-100%);123(A-42%,G-98%);124(C-100%);129(C-98%,T-23%);138(A-13%,T-100%);141(A-100%);144(G-100%);150(G-45%,A-96%);163(A-13%,T-100%);164(C-100%);171(C-6%,T-100%);174(T-100%);175(G-13%,A-100%);176(T-100%);177(A-100%);181(A-22%,T-99%);186(G-100%);190(C-100%);192(G-99%,T-11%);194(G-99%,T-20%);197(A-100%);198(T-100%);201(C-11%,T-99%);209(A-11%,C-99%);213(A-100%);222(C-100%);223(A-95%,T-43%);224(A-11%,C-99%);225(A-11%,t-99%); | G;G;C;G;C;A;T;G;C;C;T;A;G;A;T;C;T;T;A;T;A;T;G;C;G;G;A;T;T;C;A;C;A;C;T | G;G;C;G;C;A;T;G/A;C;C;T;A;G;G/A;T;C;T;T;A;T;A;T;G;C;G;G;A;T;T;C;A;C;A;C;T |
| 220 | AGAATTGGAAGATTAAGAGGTATTTTCG | GCTGGCTGTATCCTTCATAATGTGA | 53(G-100%);62(G-8%,A-98%);81(C-100%);95(C-21%,G-98%);99(G-100%);101(A-15%,g-99%);107(g-100%);119(t-100%);130(A-100%);137(A-100%);139(G-100%);140(G-15%,A-99%);173(A-100%);182(G-100%);188(C-75%,T-61%); | G;A;C;G;G;G;G;T;A;A;G;A;A;G;C | G;A;C;G;G;G;G;T;A;A;G;A;A;G;C |
| 221 | GCAGATGCTGATTGCTATTATGGTT | AATTCCTCTTTCAAGGGCAAATTGC | 37(A-21%,C-100%);40(A-100%);42(G-100%);45(T-100%);55(T-100%);59(A-100%);60(T-100%);65(A-100%);69(A-5%,C-100%);77(T-100%);80(g-100%);95(G-20%,t-100%);110(A-72%,T-95%);122(A-97%,G-64%);164(A-10%,G-100%);230(C-9%,T-100%); | C;A;G;T;T;A;T;A/T;C;T;G;T;T/A;G/A;G;T/C | C/A;A;G;T;T;A;T;A;C;T;G;T/G;A/T;G/A;A/G;T |
| 222 | TGTTGATCATTTGCTGTATGCGTAA | TGCACAAGAAAATGCAGTTTAGTATTG | 37(A-100%);42(T-100%);43(G-100%);49(G-100%);54(A-93%,T-51%);63(C-100%);73(A-100%);87(A-100%);102(G-100%);111(G-100%);141(G-100%);154(G-100%);166(C-100%);169(G-100%);173(C-100%);175(T-98%);177(C-100%);178(C-100%);186(T-100%);188(A-100%);192(A-100%);202(C-97%,A-22%);220(C-100%);237(T-100%); | A;T;G;G;A;C;A;A;G;G;G;G;C;G;C;T;C;C;T;A;A;C;C;T | A;T;G;G;A;C;A;A;G;G;G;G;C;G;C;T;C;C;T;A;A;C;C;T |
| 223 | TCTTATCGAGCAGGACTAATAGCAC | GAGCAGAGCGAAGAAGGGAAG | 38(C-100%);39(T-100%);40(T-100%);42(T-100%);43(A-100%);59(A-100%);60(T-100%);64(C-100%);66(C-17%,T-100%);67(G-6%,A-100%);69(T-100%);76(A-100%,G-20%);94(T-100%);115(G-100%);127(C-100%);148(G-100%);151(A-62%,G-96%);181(C-100%);184(C-100%,A-16%);196(C-100%); | C;T;T;T;A;A;T;C;T;A;T;A;T;G;C;G;G;C;C;C | C;T/C;C/T;T;A;A/G;T;T/C;T/A;A;C/T;G/A;T/C;G;C;G/C;G/A;C;C;C |
| 224 | AGGCATTCAAATAAGCAAGAAATCA | GCAAATTGAGGGCCCAGAAAG | 42(A-8%,C-100%);44(G-99%);46(T-99%);47(G-5%,A-97%);50(G-100%);51(G-100%);52(G-100%);53(C-97%,T-7%);54(G-99%);57(C-100%);58(C-64%,T-85%);59(C-98%);60(G-61%,A-86%);61(C-99%,T-10%);62(G-98%);64(C-100%);65(C-100%);66(C-10%,G-98%);67(G-8%,T-100%);71(C-99%);72(A-9%,G-100%);73(A-46%,G-91%);74(C-100%);80(C-85%,T-64%);85(A-28%,C-96%,T-8%);88(T-97%);99(G-5%,T-97%);100(G-100%);103(C-100%);104(A-85%,G-57%);105(G-100%);106(T-99%);108(C-10%,T-94%);109(C-97%);110(G-100%);111(G-98%);112(T-100%);114(C-100%);118(A-99%);119(G-100%);122(C-97%);125(A-37%,G-96%);126(A-10%,G-99%);127(C-98%);135(A-87%,G-55%);138(C-99%);143(C-100%);145(A-100%);149(A-98%);154(C-99%);155(A-99%);167(C-97%);170(C-11%,T-93%);172(C-100%);180(C-99%);182(A-85%,G-57%);192(G-99%);195(G-100%);197(A-28%,G-97%);198(G-99%);203(G-100%);204(G-99%);207(C-98%);209(T-99%);210(C-98%);212(G-99%);217(A-100%,T-9%);218(G-100%);219(A-85%,G-41%);220(C-97%);221(G-96%);222(C-9%,T-97%);223(G-95%);226(C-92%,T-7%);227(G-96%,A-32%);228(C-100%);230(C-96%,G-9%,T-5%); | C;G;T;A;G;G;G;C;G;C;T;C;A;C;G;C;C;G;T;C;G;G;C;C;C;T;T;G;C;A;G;T;T;C;G;G;T;C;A;G;C;G;G;C;A;C;C;A;A;C;A;C;T;C;C;A;G;G;G;G;G;G;C;T;C;G;A;G;A;C;G;T;G;C;G;C;C | C;A;T;A;G;G;G;T;G;C;C;C;G;C;G;C;C;G;T;C;G;G;C;T;C;T;T;G;C;G;G;C;C;G;G;G;T;C;A;G;T;G;G;C;A;A;C;A;A;C;A;C;C;C;C;G;G;G;G;T;G;G;C;C;C;G;A;G;G;C;G;T;G;T;G;C;C |
| 225 | CCCATTTTGGTATGCAAGATAATTATATGT | TCATTATCTGGTGTGTGCAAATACC | 54(C-98%,T-45%);102(G-100%);103(C-100%);111(G-100%,A-20%);121(T-100%);131(T-100%);135(G-100%);138(G-100%,A-23%);150(C-100%);164(C-100%);171(G-7%,A-100%);181(a-100%);190(a-20%,T-100%);191(t-100%);196(c-100%);203(t-100%);209(G-100%,a-20%);212(g-100%);213(c-100%);215(A-19%,g-100%); | T/C;G;C;A/G;T;T;G;G/A;C;C;A;A;A/T;T;C;T;A/G;G;C;G | C/T;G;C;G;T;T;G;G/A;C;T/C;A;G/A;T;T;C;T;G;G;C;G/A |
| 226 | CCTTGTAAAGAAACTTACGCATTGC | TTCTTACATTCTTTGAGCGAAGTGC | 41(G-100%);47(C-100%);86(T-100%);87(G-33%,C-100%);91(C-100%);93(A-100%);96(A-6%,G-100%);117(G-5%,A-100%);127(C-37%,T-100%);131(A-22%,G-100%);135(T-100%);138(A-22%,C-100%);146(C-8%,A-100%);183(C-5%,A-100%);189(G-100%); | G;C;T;C;C;A;G;A;T;G;G/T;C;A;A;G | G;T/C;T;C/G;C/T;C/A;A/G;G/A;C/T;G;T;C;A;A/C;G |
| 227 | CACCTGAAGAGCAAAGAACTTAGTG | TTCATTTATTTTTGCCCGATCATGC | 41(t-99%);52(G-100%);112(C-99%);118(C-100%);131(T-99%);143(C-100%,T-6%);150(A-100%);159(C-100%);160(C-9%,T-99%);187(G-71%,a-83%);198(T-100%);201(G-100%);209(A-99%,T-9%);215(G-94%,A-53%); | T;G;C;C;T;C;A;C;T;A;T;G;A;G | T;G;C;C;T;C;A;C;T;A;T;G;A;A |
| 228 | GTGTTTCACTTTAGCATCACCAAGA | GCAAATAGACTTGCTGGAGATCA | 39(A-100%);49(C-100%);52(A-100%);54(G-100%);63(C-100%);66(G-100%,A-22%);75(A-100%);132(C-99%,T-26%);150(C-26%,G-98%);153(C-100%);165(G-100%);192(T-99%); | A;C;A;G;C;G;A;C;G;C;G;T | A;C;A;G;C;G;A;C;G;C;G;T |
| 229 | GACTCTACCCATCGCGGC | GCTTTAGACGCAGCCCGC | 31(C-100%);34(C-100%);37(C-100%);42(C-100%);43(A-42%,G-100%);45(A-21%,C-100%);54(A-100%);57(C-100%);59(T-100%);78(A-15%,G-100%);81(G-100%);84(G-100%);92(A-100%);95(C-100%);100(G-100%);112(A-100%);116(T-100%);124(G-100%);126(A-100%);132(G-100%);134(G-100%);135(A-100%);140(A-20%,G-100%);141(A-100%);150(A-10%,G-99%);174(G-100%);177(G-100%,T-26%);189(G-100%);209(C-99%,T-55%);213(G-86%,T-82%);219(A-100%);228(G-100%);229(C-100%,G-10%);230(G-100%);235(G-100%); | C;T/C;C;C;G;C;A;C;T;G;G;G;A;C;G;A;T;G;A;G;G;A;G;A;G;G;G;G;C;G/T;A;G;G/C;G;G | C;C;C;C;G;C;A;C;T;G;G;G;A;C;G;A;T;G;A;G;G;A;G;A;G;G;G;G;C;T;A;G;C;G;G |
| 230 | AACATTTACGCTCTCACAAAGTGG | ACATCCTTTCACCATTAAAAGTGCT | 50(G-100%);51(G-96%,T-19%);54(A-26%,T-94%);55(A-94%,G-26%);64(A-26%,T-94%);67(C-100%);72(C-26%,T-94%);77(C-100%,T-5%);79(A-100%);92(C-21%,t-99%);98(A-5%,t-100%);105(g-100%);117(C-100%,T-9%);119(C-9%,T-100%);137(G-100%);138(G-100%);139(C-9%,T-100%);142(G-100%,T-9%);155(T-100%);157(C-100%);158(G-100%);164(A-100%);169(A-96%,G-19%);171(A-94%,G-26%);176(A-94%,T-26%);198(A-94%,T-26%);199(C-100%);202(G-96%,A-19%);203(G-100%);204(A-99%,T-10%); | G;T;A;G;A;C;C;C;G;T;T;G;C;T;G;G;T;G;C;C;G;A;G;G;T;T;C;A;G;A | G;T;A;G;A;C;C;C;A;T;T;G;C;T;G;G;T;G;T;C;G;A;G;G;T;T;C;A;G;A |
| 231 | TGTTGTAGCAATATAATTCAAATCGTATTCA | TGCATACAGAGTAACAGTAAAGAAATGA | 49(A-100%);55(A-32%,T-91%);70(A-100%);76(A-100%);143(C-19%,G-99%);150(T-100%);153(G-100%);223(A-100%); | A;T;A;A;G;T;G;A | A;T;A;A;G;T;G;A |
| 232 | AATGGATGATGAGGGTGTCCATC | CGAAAGCCCATATGAAATTGCATTG | 49(A-13%,G-99%);59(C-100%,A-17%);73(A-100%);100(C-100%);103(G-100%);110(C-100%);112(A-94%,T-81%);119(A-17%,T-100%);124(C-21%,T-100%);138(C-100%);151(A-10%,G-100%);178(A-81%,G-94%);181(C-21%,T-100%);182(T-100%);197(G-100%);223(C-100%); | G;C;A;C;G;C;A/T;T;T;C;G;G/A;T;T;G;C | G;C;A;C;G;C;A;T;T;C;G;G;T;T;G;C |
| 233 | AAAAGAGCATTAAATTGTTTCTGAAAAC | TGGTTGCTTTGATCCTATTCAATTCT | 58(T-100%);63(A-13%,C-100%);65(C-100%);75(A-21%,C-100%);86(C-100%);97(G-100%);109(C-100%);110(G-100%);120(T-100%);164(C-100%);168(C-100%);172(A-100%);178(G-100%,T-10%);179(A-100%);202(A-100%);216(G-100%,T-7%);220(T-100%); | ND | T;A/C;C;C/A;C;G;C;G;T;C;C;A;G;A;A;G;T |
| 234 | TTTATAGGTCACCGTCGCATGC | CATCATCGAATTCGCCTTCCG | 37(A-100%);77(C-100%);85(G-13%,A-100%);101(T-100%);123(G-100%);128(C-100%);129(C-100%);133(C-100%);135(C-99%,T-17%);136(A-14%,T-100%);154(G-26%,A-100%);162(A-100%);165(A-100%);168(T-100%);187(A-100%,T-13%);208(A-100%);212(T-100%);215(A-100%);216(C-100%);217(G-100%);219(G-100%);225(G-100%);226(A-100%);228(A-100%);229(A-21%,G-99%,C-21%);240(C-6%,T-100%);241(A-100%);242(C-99%,T-13%); | A;C;A;T;G;C;C;C;C;T;A;A;A;T;A;A;T;A;C;G;G;G;A;A;G/C;T;A;C | A;C;A;T;G;C;C;C;C;T;A;A;A;T;A;A;T;A;C;G;G;G;A;A;C/G;T;A;C |
| 235 | TCAACCATGAATCATCTAATGGTGA | GGATCTTGATGTTAAATAGTGATGCTCA | 52(A-100%);55(A-14%,G-100%);87(A-100%);90(G-100%);100(A-100%);102(G-6%,A-100%);108(G-100%);109(A-100%);111(A-59%,T-94%);113(G-100%);115(C-100%);121(A-79%,C-83%);127(T-100%);129(G-100%);131(C-100%);138(C-100%,T-20%);139(G-100%);144(C-100%,A-20%);145(A-100%);150(C-79%,T-83%);159(C-100%);162(C-33%,T-98%);163(A-16%,G-99%);182(a-100%);186(C-14%,t-99%);199(G-99%,A-33%);204(A-16%,T-100%);210(G-99%,A-20%);214(A-9%,G-100%);217(C-16%,T-100%);226(C-99%,T-34%);234(G-100%); | A;G;A;G;A;A;G;A;A;G;C;C;T;G;C;C;G;C;A;T;C;T;G;A;T;G;T;G;G;T;C;G | A;G/A;A;G;A;A;G;A;T;G;C;C;T;G;C;C;G;C;A;T;C;-/C;A/-;A;T/C;G/A;A/T;G;G/A;T/C;T/C;G |
| 236 | GCAACAACTAGGAAAAGTGGGAAAA | TGTGATTCATGTGTTTTGAATTCTCA | 42(C-62%,a-79%);45(a-100%);62(G-100%);63(A-62%,G-79%);71(G-55%,T-84%);82(T-100%);83(A-5%,G-99%);87(C-98%,A-9%);89(A-97%,G-29%);96(A-100%);98(G-100%);100(G-100%);102(G-100%);107(A-100%,T-6%);128(A-100%);130(A-35%,C-94%);151(A-100%);154(A-10%,G-99%);156(C-55%,T-84%);161(C-100%);163(C-99%,T-14%);164(C-99%,T-14%);169(G-100%);177(G-5%,T-99%);180(A-100%);193(C-14%,G-99%);198(A-100%);201(G-42%,A-91%);202(A-84%,G-49%,T-14%);204(T-100%);210(C-7%,T-100%);212(A-42%,G-91%);216(T-100%);217(C-100%);223(C-87%,T-53%); | A/C;A;G;G/A;G/T;T;G;A/C;A/G;A;A/G;G;G;A;A;C;A;G;C/T;C;C;C;A/G;T/G;A;G;A;A;A/G;T;T;G;T;C;C | C;A;G;A;T;T;G;C;A;A;G;G;G;A;A;C;A;G;T;C;C;C;G;T;A;G;A;A;A;T;T;G;T;C;C |
| 237 | GAAGTGGTATCGGTTTCCAAAGTC | TTTAAAATCTCCCTCCATCCCTCTC | 37(C-100%,T-19%);52(G-100%);55(A-24%,G-100%);60(C-100%);64(A-8%,G-100%);75(G-100%);85(C-10%,G-100%);91(C-23%,T-100%);106(G-7%,C-100%);112(T-100%);150(G-18%,C-100%,T-7%);181(G-100%);182(G-100%);185(A-11%,G-100%);198(a-100%);207(g-100%);212(A-5%,C-100%);214(A-11%,G-100%);219(G-100%); | C;G;G;C;G;G;G;T;C;T;C;G;G;G;A;G;C;G;G | C;G;G;C;G;G;G;T;C;T/C;C/G;G;G;G;A;T/G;C;G;G |
| 238 | TCATCTTCATCAGCCATCTCATCAT | GAATCCACGTAATACTGCTGTTGTC | 42(C-100%);43(C-100%);59(C-19%,T-100%);64(A-19%,T-100%);68(G-51%,A-100%);70(C-13%,T-100%);87(C-22%,T-100%);92(T-100%);100(T-100%);103(A-100%,C-38%);104(G-100%,T-12%);108(G-12%,A-100%);111(T-100%);117(A-19%,C-100%);119(A-19%,T-100%);121(T-100%);126(T-100%);129(G-100%,T-22%);133(A-13%,T-100%);135(A-19%,C-100%);140(C-100%);142(G-100%,T-38%);145(T-100%);158(C-100%);160(C-100%);163(A-100%);171(C-100%);180(G-12%,T-100%);200(C-100%,T-19%);206(C-19%,T-100%);211(C-100%,T-19%);217(C-5%,T-100%);234(C-19%,G-100%); | C;C;T;T;A;T;T;T;T;A/C;G;A;T;C;T;T;T;G;T;C;C;T/G;T;C;C;A;C;T;C;T;C;T;G | C;C;C/T;A/T;A;T;T;T;T;A/C;G;A;T;C/A;A/T;T;T;G;A/T;C/A;C;G/T;T;C;C;A;C;G/T;C/T;C/T;T/C;T;G/C |
| 239 | TTTATGATCGCACAAAGAAGCC | TCCTCAACCGTATCAATTGCTTAAG | 46(G-16%,A-100%);68(C-9%,T-100%);78(C-9%,G-98%);99(A-100%,T-27%);113(g-100%,T-8%);115(a-100%);123(C-27%,g-100%);125(G-27%,C-100%);134(A-27%,t-100%);137(g-99%);147(C-21%,a-100%);152(C-100%,T-27%);157(G-27%,A-100%);158(C-100%,T-27%);172(A-100%);173(C-100%,T-17%);186(C-27%,T-100%);191(C-100%);204(G-100%,T-10%);206(C-27%,G-14%,T-99%);225(G-99%,A-29%);231(G-89%,T-75%); | A;T;G/C;A;G;A;G;C;T;G;A;C;A;C;A;C;T;C;G/T;T;G;G/T | A;T;G;T/A;T/G;A;G/C;G/C;T/A;G;A;T/C;G/A;T/C;A;C;T/C;C;G;T/C/G;G/A;T/G |
| 240 | TAATTTTTGGTCCTTTCATAGGCCG | CCTTTGCAACTCTCCACCAGA | 57(G-18%,A-100%);60(T-100%);114(G-100%);192(C-100%,T-42%);217(C-100%,T-9%); | A/G;T;G;C;C | G/A;T;G;T/C;C |
| 241 | CTCATGTTCAAAAGAACCAGACCTC | ACTGGTTTGGTTTGTTTTCATCTCA | 38(T-100%);49(T-100%);53(A-100%);116(A-100%);128(A-100%);135(C-100%);139(A-29%,G-100%);142(G-100%);151(G-100%);154(C-100%,T-8%);155(A-62%,T-100%);156(A-100%);169(A-100%);171(C-33%,T-100%);183(A-100%);185(C-100%);191(G-100%);195(G-16%,A-100%);202(C-100%);206(g-99%,T-74%);210(t-100%);212(a-100%,T-5%);222(c-100%,T-16%);231(A-100%);232(T-100%); | T;T;A;A;A;C;G/A;G;G;C;T;A;A;T/C;A;C;G;A;C;G;T;A;C;A;T | T;T;A;A;A;T/C;A/G;G;G;T/C;T;A;A/T;C/T;A;C;G;A;C;G;T;A;C;A;T |
| 242 | GATGAACCTTCAATTTTTGGGGTCT | CATGCTGACAGTAAGTGATGATGAA | 43(C-100%);105(G-80%,T-74%);126(G-13%,A-100%);144(G-100%,T-13%);159(C-100%,T-6%);171(G-13%,A-100%);174(G-24%,A-100%);180(G-5%,A-100%);192(A-28%,T-99%);200(A-74%,G-80%);201(C-74%,A-80%);213(G-6%,C-100%);216(A-5%,T-100%);220(C-19%,G-100%);225(T-100%); | C;G;A;G;C;A;A;A;T;G;A;C;T;G;T | C;T/G;A/G;T/G;T/C;G/A;A;A;A/T;G/A;A/C;C;T;G;T |
| 243 | CATTATCGATCTCAAACACCGATCC | AAAATCTTCTTTGACTCGCTCAACG | 39(A-100%);43(G-100%);66(g-99%,T-61%);83(t-100%);91(C-9%,T-100%);107(G-100%,T-8%);109(A-10%,G-100%);112(T-100%);113(A-10%,T-100%);115(C-100%,T-26%);116(G-10%,T-100%);118(C-100%,T-10%);122(C-14%,A-100%);124(C-9%,T-100%);125(C-100%);170(A-100%);172(G-100%,T-9%);174(T-100%);211(A-10%,G-100%); | A;G;G;T/C;T;G;G;T;T;C;T;C;A;T;C;A;G;T;G | A;G;G;T;T/C;G;G;T/G;A/T;C;T/G;C/T;A;T/C;C;A;G/T;T;G |
| 244 | GCATCAACACTTGACTCTTTGTTAGA | GCCTGAATTAAAACTTGAAACCCTG | 48(A-100%);132(C-17%,T-100%);156(G-35%,T-99%);157(C-44%,T-99%);159(G-15%,A-100%);164(G-21%,A-100%);167(C-100%);170(A-44%,C-99%);176(A-21%,T-100%);191(a-100%,T-15%);198(A-15%,t-100%);205(T-100%);210(C-13%,T-100%);219(G-21%,a-100%);220(A-13%,G-9%,t-100%);223(a-100%);229(A-21%,t-100%);231(g-100%,T-21%);237(C-18%,T-100%); | A;C/T;T;T;A;A;C;C;T;A;T;T;T;A;T;A;T;G;T | A;T;T;C/T;G/A;G/A;C;C/A;A/T;T/A;T/A;T/C;C/T;G/A;T/A/G;A;T/A;G/T;T/C |
| 245 | TGCTCAAATAATTTTGCATTTCAGGAC | ATAGTACCTTTGCCAACAATATCCT | 76(G-13%,T-100%);80(A-100%);85(A-36%,G-100%);87(C-100%);88(C-98%);96(T-100%);97(A-9%,G-100%);103(A-100%);105(G-100%);112(C-100%,T-11%);122(G-100%);133(G-100%,T-23%);163(C-9%,T-100%);187(C-100%); | T;A;G/A;C;C;T;G;A;G;C;G;G;T;C | T;A;G;C;C;T;A/G;A;G;C/T;G;G/T;C/T;C |
| 246 | GTGGTTCACGGACAGATTATTCTTC | GGAGTAATAATCTCCCCAAATCCTA | 36(A-100%);78(C-97%,T-61%);82(C-100%,T-5%);87(A-100%);89(C-100%);107(G-100%);108(C-100%,T-22%);118(C-100%);119(T-100%);160(T-100%);162(A-22%,G-100%);177(G-13%,A-100%);189(C-100%);192(C-100%); | A;T;C;A;C;G;C;C;T;T;G;A;C;C | A;T/C;C;A;C;G;T/C;C;T;T;A/G;A;C;C |
| 247 | ACCCATTAGCAGTTAAAAACACACT | AGCTATTGTACCACACATGATATCT | 37(G-100%);46(A-33%,G-100%);53(C-99%,T-42%);57(A-15%,T-100%);83(C-100%);99(G-100%);108(A-100%);117(A-98%);147(A-43%,T-100%);157(G-15%,A-100%);163(A-100%,T-33%);165(C-100%);213(C-99%,A-44%); | G;A/G;C;T;C;G;A;A;T/A;A;A;C;A/C | G;G;T/C;T;C;G;A;A/-;A/T;A;A;C;A/C |
| 248 | CTGCTGGAGGAAACAGTTCTTTG | ATATGTTACTTGTTTGAGGTGCAGG | 65(C-100%);68(T-100%);74(T-100%);101(G-100%);113(G-14%,A-100%);122(A-100%);143(A-98%,T-23%);160(C-100%);171(G-100%);188(C-24%,A-99%);195(G-24%,A-99%);203(T-100%);210(A-100%);212(G-100%);218(A-100%);219(C-100%);223(C-100%);228(C-96%,G-30%); | C;T;T;G;A;A;T;C;G;A;A;T;A;G;A;C;C;G | C;T;T;G;A;A;T;C;G;A;A;T;A;G;A;C;C;G |
| 249 | TAATAAACTTCAACTCAGCTTCAGC | AATACTGCAAGAGAAATGGTGAAGG | 46(c-38%,T-97%);51(A-100%);82(C-100%,T-17%);87(C-100%,T-17%);105(A-100%);108(A-8%,G-100%);125(G-100%,T-9%);126(C-100%);167(G-17%,T-100%);176(A-12%,T-100%);196(A-100%); | T/C;A;C;C;A/G;G;G;C;T;A/T;G/A | T;A;C;C;A;G;G;C;T;T;A |
| 250 | CTTGCTGCTACTTTGGAGATCATG | TAAAACCAATGCCATATTCACCAGC | 39(C-100%);42(C-100%);47(C-100%,T-18%);50(T-100%);56(A-100%);64(A-100%);71(A-100%);74(G-15%,A-100%);77(A-17%,G-100%);81(A-100%);84(C-100%);85(G-100%);86(G-100%);93(C-100%);95(G-91%,C-83%);98(A-100%);103(G-10%,A-100%);104(G-100%);115(A-100%);124(A-100%);125(A-70%,G-95%);126(A-100%);127(A-100%);128(C-100%);146(G-92%,A-80%);147(A-66%,G-97%);160(C-47%,T-99%);166(T-100%);171(C-100%);181(A-100%);183(A-10%,G-100%);188(A-100%);190(C-100%);197(A-100%);201(A-100%);206(G-11%,C-100%,T-7%);207(A-11%,G-100%);214(C-100%);221(A-100%);239(C-100%,T-17%); | C;C;C;T/C;A;A/T;A;A;G;G/A;C/A;G;G;C;C;A;A;G;A;A;G;A;A;C;A;G/A;C/T;T;C;A;G;A;C;A/G;A;C;G;C;A;C | C;C;C;T;A;A;A;G/A;G/A;A;C;G;G;C;C;A;A;G;A;A;G;A;A;C;A;A/G;T/C;T;C;A;G;A;C;A;A;C/G;A/G;C;A;C/T |
| 251 | TGACACATACCAATTCCCATAAAACA | TTTATCATAAACTTGCTGGAATTTGAC | 53(C-92%,T-62%);58(A-100%);61(A-100%);71(G-100%);82(A-21%,T-91%);101(T-100%);103(A-100%);111(A-91%,G-21%);115(G-100%);120(C-100%);127(C-8%,T-100%);128(C-100%);130(A-91%,G-29%);180(G-13%,T-94%);192(A-8%,G-100%);194(G-13%,T-94%);196(G-80%,A-74%);218(C-53%,a-90%);219(C-7%,g-100%); | T;T/A;A/T;G;T;T;A;A;G;C;T;C;A;T;G;T;A;A;G | C;A;A;G;A;T;A;G;G;C;T;C;G;T;G;T;A;A;G |
| 252 | GGTGTGTTATGGGATTTGTCTCG | GGGAACAGACTATAGGATTAATCAGACA | 39(A-100%);43(C-54%,A-87%);54(G-100%);66(A-9%,G-100%);69(T-100%);84(A-20%,G-98%);99(C-18%,T-99%);105(G-100%);118(G-100%);120(G-100%);123(A-100%);132(G-100%);141(G-8%,A-99%);144(A-19%,C-100%);149(C-6%,T-100%);181(C-15%,A-99%);190(A-8%,C-98%,T-6%);193(G-100%);195(G-100%,T-6%);201(A-14%,T-99%);208(A-100%);209(T-100%);210(C-7%,T-100%);215(A-100%);217(G-95%,T-23%);220(C-100%);221(G-23%,T-95%); | A;A;G;G;T;A;T;G;G;G;A;G;A;C;T;C;C;G;G;T;A;T;T;A;G;C;T | A;A/C;G;G;T;G;T/C;G;G;G;A;G;A;A/C;T;A;C;G;G;T;A;T;T;G/A;G;C;T |
| 253 | TCATGACTGAGGAGGAATTGTAAGC | AGAATGTTATTCGCCGATCTTTCAC | 38(C-100%);39(G-100%);70(C-19%,T-99%);75(G-26%,T-97%);91(C-100%,T-12%);92(A-98%,G-8%);96(A-97%,G-26%);99(G-100%);105(G-100%);114(A-96%,G-34%);126(C-46%,T-94%);127(A-94%,T-45%);128(G-100%);137(G-100%);138(A-15%,G-100%);141(C-100%);146(A-100%,T-6%);153(A-12%,G-100%);158(C-100%);169(A-94%,C-46%);175(C-100%);189(A-9%,G-100%);195(C-99%,A-8%);199(G-100%);204(G-100%);206(A-94%,G-45%);207(G-10%,A-95%);210(G-100%);221(A-7%,C-99%);224(G-100%);229(C-94%,A-46%); | C;G;T;T;C;A;A;G;G;A;T;A;G;G;G;C;A;G;C;A;C;G;C;G;G;A;A;G;C;G;C | C;G;T;T;C;A;A;G;G;A;T;A;G;G;G;C;A;G;C;A;C;G;C;G;G;A;G;G;C;G;C |
| 254 | CAACAAGCACCTGTACTCTACAAAA | ACATTGTGGATTGGGCTGAGAAG | 64(T-100%);70(A-50%,C-99%);76(C-100%);77(A-8%,T-100%);80(G-100%);81(C-100%);120(G-100%);124(A-99%);125(A-6%,G-100%);138(G-100%);145(T-100%);169(G-23%,T-100%);171(T-100%);175(A-99%,T-26%);177(T-100%);181(C-99%,A-26%);187(T-100%);202(A-44%,C-100%,T-18%);233(C-100%,T-6%); | T;C;C;T;G;C;G;A;G;G;T;T;T;A;T;C;T;A/C;C | T;C/A;C;T;G;C;G;A;G;G;T;T;T;A;T;C;T;C;C |
| 255 | CTTTCCTATTTAGGTTGCTCGTGG | AGTGCCATGTCTGTAAATATGAAAG | 37(A-100%);41(A-31%,T-97%);49(G-100%,T-15%);56(C-9%,T-100%);59(C-19%,A-99%);82(T-100%);103(C-98%,T-19%);142(G-5%,A-100%);160(T-100%);162(A-99%,T-19%);167(C-8%,T-99%);169(C-99%,T-15%);171(T-100%);172(A-12%,T-99%);190(C-100%);192(G-16%,T-99%);193(G-99%,T-15%);196(A-86%,T-77%);200(T-100%);204(A-100%);208(G-19%,A-99%);209(C-93%,T-55%);211(G-100%);226(a-100%);228(G-9%,a-99%);234(A-99%,t-14%);238(c-100%); | A;T;T/G;T;A;T;C;A;T;A;T;C;T;T;C;T;G;T;T;A;A;C/T;G;A;A;A;C | A;A;G;T;C;C;T;A;T;T;C;C;T;T;C;T;G;A;T;A;G;T;G;A;A;A;C |
| 256 | AGCTAAGTTTTCTCTTCAATGAAGGC | GGCACGAAATATGTGCAGAAAATTC | 41(a-100%);63(t-100%);65(A-5%,g-100%);76(C-100%);82(T-100%);83(G-100%,T-19%);85(A-100%);95(G-100%);99(A-100%);100(A-100%);101(C-100%);103(A-6%,G-100%);105(A-18%,C-100%);106(C-100%);107(A-100%,T-10%);116(C-100%);140(T-100%);143(A-100%);149(A-100%);170(T-100%);174(C-100%);187(a-100%);208(C-100%,T-20%);209(G-100%);213(C-100%);214(C-100%);215(C-20%,T-100%);216(G-100%);217(A-100%);218(C-100%,T-10%);221(A-100%,T-20%);223(A-100%); | A;T;G;C;T;G;A;G;A;A;C;G;C;C;A;C;T;A;A;T;C;A;T/C;G;C;C;T;G;A;C;A;A | A;T;G;C;T;G;A;G;A;A;C;A/G;C;C;T/A;C;T;A;A;T;C;A;T/C;G;C;C;C/T;G;A;T/C;T/A;A |
| 257 | CAAACCTTCATCAATACTGGCATCA | ACATTTAGCGATGTTTTCAGGGTAC | 40(G-100%);42(T-100%);49(C-20%,T-100%);62(G-100%);67(T-100%);127(T-100%);155(A-9%,C-100%);159(G-16%,C-100%);164(T-100%);166(T-100%);187(A-8%,G-100%);221(A-100%,G-19%);224(A-100%); | G;T;T/C;G;T;T;C;C;T;T/C;G;G/A;A | G;T;T;G;T;T;C;G/C;T;T;G;A;A |
| 258 | TTTAAATGAATCTCCTCAGCCAACA | TGAGTGTTCAGGAATTCTATTATGTC | 40(A-98%,G-22%);47(T-100%);49(A-26%,G-99%);64(C-7%,T-100%);65(A-7%,G-100%);72(A-100%);80(G-11%,C-100%,T-7%);86(G-100%);88(C-100%,T-32%);96(A-100%);101(C-99%,T-26%);103(C-100%);108(G-32%,A-100%);112(C-93%,A-43%);113(C-7%,T-98%);114(C-100%,T-9%);116(G-100%);117(A-100%);126(C-100%,A-7%);133(G-15%,A-100%);134(G-100%);138(A-7%,T-100%);140(C-100%,T-22%);141(C-11%,T-100%);150(A-100%);161(C-100%);162(C-98%,A-43%);176(C-100%);197(A-17%,G-100%);198(C-98%,T-40%);199(T-100%);204(C-22%,T-100%);205(C-100%,T-11%);208(A-100%); | G/A;T;G;T;G;A;C;G;C/T;A;C;C;A/G;C/A;T;C;G;A;C;G/A;G;T;T/C;T;A;C;A/C;C;G/A;C/T;T;T/C;C;A | A;T;G;T;G;A;C;G;C;A;C;C;A;-;C;C;G;A;C;A;G;T;C;T;A;C;C;C;G;C;T;T;C;A |
| 259 | TTCAACAAATTTAAAACTTGATATTCATCAA | ACCTTATTTAATGAATTTGCTATTATTCGT | 58(T-100%);68(T-100%);71(G-36%,A-98%);90(C-9%,G-100%);104(T-100%);106(A-6%,C-100%);107(A-9%,G-100%);139(C-100%,T-6%);181(a-98%,T-36%);186(A-11%,g-100%);189(A-6%,G-100%);199(A-93%,G-62%);223(g-100%); | T;T;A;G;T;C;G;C;A;G;G;A;G | T;T;A/G;G;T;C;G;C;T/A;G;G;A/G;G |
| 260 | TTTTGCTAAACTTATTCCTAGGAACA | AGTGTGATGAAATTCGAAGACCAAA | 46(C-100%,T-44%);53(A-98%,T-57%);54(C-100%,T-19%);63(C-100%);91(A-100%,T-5%);98(A-12%,C-100%);114(G-100%);142(G-100%);146(G-100%);147(G-100%);165(T-100%);170(A-100%);172(C-100%);177(G-100%); | C;A/T;C;C;A;C;G;G;G;G;T;A;C;G | C;T/A;C;C;A/T;C;G;G;G;G;T;A;C;G |
| 261 | GGGCCTGATCTTAAATAGTGGAGAT | TGCTTATGAATTTTTGTTTTCGGAAGT | 46(C-24%,T-100%);55(G-99%,T-29%);66(G-100%);80(G-100%);84(G-100%,T-6%);90(G-100%);91(T-100%);101(C-8%,G-100%);104(A-24%,T-100%);110(C-100%,T-24%);143(C-100%,T-10%);147(A-100%);150(G-5%,C-100%);158(C-15%,T-100%);165(G-7%,T-100%);173(T-100%);186(C-100%);203(C-100%);204(A-100%);213(G-100%);219(C-19%,T-100%);221(T-100%); | T;G;G;G;G;G;T;G;T;C;C;A;C;T;T;T;C;C;A;G;T;T | T/C;G;G;G;G;G;T;G;A/T;C/T;C;A;C;T;T;T;C;C;A;G;T;T |
| 262 | TCGTTAGTGATTATCATTATTCGGAGT | TTTCTAAATTCGTTTGTTCACAGCT | 40(A-100%);55(G-100%);86(C-100%);87(C-30%,T-96%);96(G-17%,A-99%);99(G-100%);101(C-9%,T-100%);109(A-100%);115(A-100%);118(C-100%);119(A-100%);126(T-100%);127(G-52%,T-92%);133(G-100%,T-12%);151(c-99%);159(A-30%,T-96%);161(A-100%);165(G-100%);176(G-100%);188(C-9%,G-100%);189(A-100%);195(C-100%);199(C-100%,T-9%);204(T-100%);205(T-100%);208(C-62%,T-86%);210(G-99%,A-20%); | A;G;C;T;A;G;T;A;A;C;A;C/T;G/T;T/G;C;T;G/A;G;G;G;A;C;C;T;T;T/C;A/G | A;G;C;C;G;G;T;A;A;C;A;T;G;G;C;A;A;G;G;G;A;C;C;T;T;C;G |
| 263 | ACCGTTTATTTATTTGAGGCGTGTT | TTGTTATGAAGGAAAAGACGAAGCC | 44(G-26%,A-100%);49(A-100%);53(G-87%,A-77%);68(G-100%);78(C-26%,T-100%);81(C-14%,G-99%);83(T-100%);101(A-12%,G-100%);105(C-100%);107(C-100%,T-7%);108(G-100%);117(C-100%);126(G-26%,T-100%);134(C-100%);136(C-100%);142(C-100%);143(G-100%,T-14%);155(G-100%);158(A-100%);189(A-100%);195(C-100%,T-21%); | A;A;A;G;T;G;C;G;C;C;G;C;T;C;C;C;G;G;A;A;C | G/A;A;A/G;G/A;C/T;G;T;G/A;C/A;C;G;T/C;G/T;C;C;C;G/T;G;A;A;C/T |
| 264 | ATATTCCCCTGTGAAATAATTGGCG | CCTGGAGAAAGGAAAGATTGAATTC | 51(C-100%);74(A-5%,g-100%);98(T-100%);109(A-10%,C-100%);112(C-97%,T-53%);116(G-100%);118(G-10%,A-100%);124(G-10%,T-100%);128(A-10%,T-100%);191(G-9%,A-100%);201(G-10%,C-100%);227(C-53%,T-97%); | C;G;T;C;T/C;G;A;T;T;A;C;T/C | C;G;T/C;C/A;C/T;G;A/G;T/G;T/A;A;C/G;T/C |
| 265 | TTAAGCACAACCTTATCTTCTATGTTT | AAATGAAGAAAATTCCAGGGAGAGG | 45(G-19%,A-100%);50(A-7%,T-100%);51(A-100%);112(C-100%);138(C-100%,T-26%);157(G-19%,A-100%);167(C-10%,T-100%);172(A-100%);209(A-100%);215(A-100%);217(A-100%);226(C-100%);230(A-26%,C-100%);237(A-100%); | A;T;A;C;C;A;T;A;A;A/G;A;C;C;A | A;T;A;C;T/C;A;C/T;A;C/A;A;A;C;C/A;A |
| 266 | CCACGCCAAGCAACAATTTTTA | AAGATTGAATCGACAAGCGGAG | 33(G-100%);35(A-100%);50(C-10%,A-100%);55(G-10%,A-100%);63(T-100%);70(C-100%,T-22%);76(A-15%,G-100%);87(C-60%,A-100%);88(C-49%,A-100%);89(C-17%,A-100%);91(C-74%,A-100%);96(C-100%);99(A-20%,C-90%);114(G-5%,A-100%);139(C-100%);145(C-100%);177(T-100%);192(G-100%);203(C-100%);220(G-98%,C-27%);221(C-15%,T-99%);224(C-99%,T-15%);226(T-100%);238(A-100%);239(A-100%); | G;A;A;A;T;C;G;A;A/C;A/G;A/C;C;C;A;C;C;T;G;C;G/C;C/T;T/C;T;A;A | G;A;A/C;A/G;T;T/C;A/G;A;A;A;A;C;C/A;A;A/C;C;T;G/C;C;G/C;T;C;T;A;G/A |
| 267 | TGGTGTATCACTTATCATTTATGTCTTT | CCTACAAGACCAGGCTCTCTTTAAA | 39(G-99%);45(c-96%,T-9%);47(C-6%,t-100%);51(c-95%,T-28%);52(t-100%);64(A-10%,t-97%);71(G-100%);72(C-95%,T-30%);76(T-100%);79(G-8%,A-97%);87(G-10%,T-98%);91(C-95%,T-28%);92(C-99%);94(T-100%);95(G-82%,T-56%);97(C-28%,A-95%);98(A-28%,G-95%);101(C-100%,T-6%);103(C-28%,T-96%);105(C-34%,T-92%);106(G-100%);109(T-100%);119(C-100%);126(C-28%,T-95%);129(C-28%,T-95%);135(C-99%);137(G-100%);143(A-11%,C-98%);146(C-6%,A-100%);149(A-7%,G-100%);154(T-100%);155(C-10%,T-98%);157(G-97%,T-8%);165(C-100%);183(G-27%,A-96%);190(T-100%);191(A-28%,C-96%);194(C-100%,T-6%);198(C-100%,T-6%);199(G-100%); | G;C;T;C;T;T;G;C;T;A;G/T;C;C;T;T/G;A;G;C;T;C/T;G;T;C;T;T;C;G;C;A;G;T;T/C;G;C;A;T;C;C;C;G | ND |
| 268 | GGAGATGGCTTACTTCAGGAACTTT | ACCAGCAGGATTTAATCTTCTTCCT | 40(T-100%);52(C-100%,A-15%);61(G-100%);82(T-100%);83(G-99%);90(C-100%);100(G-28%,T-100%);121(T-100%);132(C-13%,T-100%);143(G-100%);159(G-14%,T-100%);165(A-100%,T-15%);171(A-18%,G-100%);184(G-100%);191(A-14%,G-100%);198(C-9%,G-100%);210(A-19%,C-14%,G-100%);216(C-10%,T-100%); | T;C;G;T;G;C;T;T;T;G;T;A;A/G;G;G;G;G/A;T | T/C;C;G;T;G;C;G/T;T;T/C;G;T;A;G;T/G;G;G;G;T |
| 269 | TTTTGATTGTTTCTTGCTTCAAAAGT | AAAAATGAAGCAAACACACCAGACA | 42(T-100%);46(C-94%,T-36%);59(C-100%);64(G-100%);66(A-15%,T-94%);97(A-10%,C-96%);101(A-5%,G-100%);111(G-99%);116(A-100%);133(A-100%);136(A-6%,C-100%);140(c-100%);150(g-100%);222(G-86%,A-46%);236(C-100%); | T;C;C;G;T;C;G;G;A;A;C;C;G;A;C | T;C;C;G;A;A;G;G;A;A;C;C;G;A;C |
| 270 | AGAAAATGTCTGGCAACTTACATGG | TTTTATGACACAAACCTATGCCCTG | 38(C-29%,G-100%);42(A-100%);43(T-100%);48(A-11%,T-100%);61(T-100%);62(A-99%,G-23%);64(A-100%);65(C-29%,A-100%);79(A-8%,G-100%);82(G-100%);120(T-100%);150(C-100%);162(g-100%);185(T-100%);193(G-100%);195(G-100%);217(A-6%,g-100%);223(A-100%);230(C-29%,T-100%); | G/C;A;T;T;T;G/A;A;A/C;G;G;T;C;G;T;G;G;G;A;T/C | G;A;T;T;T;G/A;A;A;G;G;T;C;G;T;G;G;G/A;A;T |
| 271 | TGTTGGCATATAAGGAGAACGAAAAA | TGACCCAAACTTGAGATATTACTCT | 40(C-99%,T-34%);43(A-6%,G-100%);44(G-100%);48(C-100%,T-12%);50(G-100%,T-6%);56(C-100%);58(A-20%,G-99%);59(T-100%);64(A-100%);69(C-100%,T-12%);74(G-100%);75(C-60%,T-94%);80(A-100%);81(G-20%,A-99%);82(G-100%);85(G-7%,A-100%);97(T-100%);98(G-100%,T-9%);100(A-7%,G-100%);106(C-100%);107(A-34%,G-99%);111(C-100%,T-7%);113(A-34%,G-99%);120(G-100%);122(A-100%);125(G-100%,T-6%);127(A-14%,G-96%,T-20%);129(G-100%,T-7%);130(C-100%);141(A-60%,G-94%);148(C-100%);157(C-100%);160(T-100%);167(G-83%,C-75%);170(T-100%);174(G-7%,A-100%);175(A-100%);176(A-7%,T-100%);186(A-45%,G-98%);193(A-83%,G-75%);198(G-100%);203(C-100%);215(T-100%);217(A-6%,C-100%);220(A-34%,C-99%);224(T-100%);230(G-100%); | C;G;G;T/C;G;C;G;T;A;C/T;G;T/C;A;A;G;A;T;G;G;C;G;C;G;G;A;G;G;G;C;A/G;C;C;T;G/C;T;A;A;T;G;A/G;G;C;T;C;C;T;G | C;G/A;G;T/C;T/G;C;G;T;A/G;T/C;G;T;A;A;G;A/G;T;G;G/A;C;G;T/C;G;G;A/-;T/G/A;G;T/G;C;G;T/C;C;T;C/G;T;A/G;A;A/T;G;G/A;G/C;C;T;C/A;C;T;G |
| 272 | AACGTTTTAGAATGTTCTCATTGTAAC | ATCTGCTATCATCTCACCAAGTGTT | 62(C-100%,T-37%);111(G-19%,a-100%);114(A-100%);121(G-100%);141(A-100%,G-22%);159(C-11%,T-100%);166(C-100%);168(T-100%);200(C-12%,T-100%); | T/C;A;A;G;A/G;T;A/C;T;T | C;A;C/A;G;A;T;C;T;T |
| 273 | GCAGCCTTGATCGATTGATAGATC | GTGATGTAGACGAGTGGGACG | 116(C-14%,T-99%);133(G-7%,A-100%);140(A-9%,G-100%);146(C-100%);165(T-100%);170(C-100%);182(C-99%,T-11%);191(A-100%);230(G-100%);242(C-100%,T-22%); | T/C;A;G;C;T;C;C;A;G;C | C/T;A;G;C;T;C;T/C;A;G;C |
| 274 | GGCTGTCACTAGTGCAACTCTTTT | CTAAGGCACAGGAATTCCAATCACT | 35(A-98%,T-16%);40(G-13%,T-99%);41(C-92%,T-82%);46(T-100%);49(T-100%);51(G-98%,A-16%);58(A-84%,T-90%);59(A-13%,C-99%);62(A-100%);76(A-18%,C-100%);78(C-100%);79(T-100%);81(C-98%,G-16%);85(A-8%,G-100%);92(C-94%,A-78%);93(A-7%,G-100%);128(C-82%,T-92%);132(C-100%);135(G-100%);136(A-13%,C-100%);137(A-88%,G-84%);145(C-98%,T-16%);149(A-100%);150(G-99%);161(C-99%,T-6%);163(C-84%,T-90%);164(G-100%);165(C-100%);166(G-98%,A-16%);167(C-100%);174(G-98%,A-16%);178(C-97%,T-69%);180(C-100%,T-15%);190(A-100%);197(A-15%,G-100%);202(C-100%,T-16%);207(A-100%);212(G-97%,T-69%);214(C-100%);217(A-20%,G-100%);220(C-15%,T-99%);227(A-44%,G-100%);235(A-69%,T-97%); | T/A;T;T/C;T;T;G/A;T/A;C;A/G;C;C;T;G/C;G;C/A;A/G;T/C;C;G;C;G/A;T/C;A;G;C;T/C;G;C;A/G;C;A/G;C/T;C;A;G;C;A;T/G;C;G;T/C;G/A;A/T | A/T;T/G;T;T;T;A/G;A;C/A;A;C/A;C;T;C/G;G;A;G;C;C;G;C;G;T/C;A;G;C;C;G;C;G/A;C;G/A;C/T;C;A;G;C;A;G/T;C;G;T/C;G/A;A/T |
| 275 | AAAAGGGAAATAATGTCCTGGAAGC | TAGAGTTCTGGGAATTCCACAGATC | 40(A-21%,T-100%);43(G-9%,A-100%);70(G-16%,T-100%);71(G-31%,T-100%);92(A-100%);93(G-100%);99(C-99%,T-53%);102(C-31%,T-100%);116(G-100%);132(A-31%,T-100%);134(A-100%);139(C-53%,G-99%);184(G-100%,A-22%);192(T-100%); | T;A;T;T;A;G;C;T;G;T;A;G;G/A;T | T;A;T;T/G;A;G;T/C;C/T;G;A/T;A;C/G;G;T |
| 276 | TCACATTAAACTTTTCCAACCATAGTGA | GCAATTGTTTGAACAGCGACATATC | 42(C-100%,T-10%);43(G-100%);47(G-16%,C-100%);53(G-36%,T-96%);79(C-99%);80(A-7%,T-100%);98(G-100%);137(C-100%);202(A-90%,G-63%); | C;A/G;C;T/G;C;T;G;C;A/G | C;G;C;T/G;C;T;G;C;G/A |
| 277 | TTACTGTAAAGGTCACAACAATGGC | GCTTTGGCTGAATCTTTCCCATATT | 37(C-100%);38(A-100%);41(A-100%);42(G-8%,A-100%);43(G-100%);47(A-100%);58(G-15%,C-100%);59(A-90%,G-85%);62(A-100%);76(G-100%,A-57%);89(A-100%);91(C-100%);93(C-100%,T-17%);94(G-100%);95(A-100%);98(A-100%);101(C-100%);103(G-100%);107(C-100%);130(G-100%);133(C-100%);134(C-5%,G-100%);139(C-100%);153(A-100%);154(C-100%,T-18%);164(C-100%);176(C-100%,T-11%);178(G-18%,A-100%);190(T-100%);196(C-41%,G-100%);197(G-100%);198(T-100%);200(T-100%);202(T-100%);205(G-100%);230(G-100%);231(C-100%);232(A-18%,C-100%);238(A-100%,T-8%); | C;A;A;A;G;A;C;A/G;A;G;A;C;C;G;A;A;C;G;C;G;C;G;C;A;C;C;C;A;T;G/C;G;T;T;T;G;G;C;C;A | C;A;A;A/G;G;A;C;A;A;G/A;A;C;C;G/A;A;A;C;G;C;G;C;G;C;A;T/C;C;C;G/A;T;G;G;T;T;T;G;G;T/C;A/C;A |
| 278 | GCCAAATTTCACCAAAATATGACCA | TCTCTCTCTCTCTCTCTTTAATGCC | 38(G-5%,C-99%,T-16%);39(G-100%);149(T-99%);206(A-96%,G-46%);223(A-96%,G-46%);224(A-96%,C-46%); | C;G;T;G;G;C | C;G;T;A;A;A |
| 279 | TCCTGAAAGAAAGCTATAACACCCT | AGATAGAGACTTCGTAAGGTGATGG | 43(G-100%,C-14%);46(C-100%);47(A-19%,G-6%,T-100%);53(A-19%,G-100%);60(G-15%,T-100%);64(C-100%,T-28%);65(G-77%,A-87%);67(T-100%);78(C-98%,T-36%);82(T-100%);88(C-100%);98(G-100%,T-14%);103(C-100%,T-14%);106(T-100%);108(A-100%);112(C-100%,T-14%);115(C-99%,T-40%);128(C-100%);131(C-61%,T-10%);134(C-96%,T-61%);136(C-100%);139(C-100%);140(A-6%,T-100%);141(A-14%,G-100%);151(G-100%);158(A-6%,G-100%,T-15%);159(G-100%,T-15%);164(C-10%,T-100%);165(A-100%);166(C-100%,T-15%);167(C-100%,T-15%);169(C-14%,T-100%);174(A-19%,T-100%);179(C-14%,A-100%);180(A-14%,T-100%);182(C-45%,T-98%);184(C-6%,T-100%);185(A-100%);192(C-100%,T-15%);200(C-98%,T-37%);201(G-14%,T-100%);204(C-100%,T-6%);216(G-100%);221(C-14%,T-100%);223(C-100%,T-14%);224(A-97%,G-52%);226(C-14%,T-100%);228(A-6%,G-100%);232(G-100%,T-6%);236(C-79%,T-87%); | G;C;T;G;T;C;A;T;C/T;T;C;G;C;T;A;C;C/T;C;IC/C;T/C;C;C;T;G;G;G;G;T;A;C;C;T;T;A;T;C/T;T;A;C;T/C;T;C;G;T;C;G/A;T;G;G;T | G/C;C;T;G;T;C/T;A/G;T;C;T;C;G/T;C;T;A;T/C;C;C;T/IC;C/T;C;C;T;G;G;G;G;T/C;A;C;C;T/C;T;A;A/T;T;T;A;C;C;T;C;G;T;C/T;A/G;T;G;G;C/T |
| 280 | ACATTTTCAACCCAATCAAAGCAAA | TTTGGAATCGGAAGCGGAAGT | 39(C-27%,G-100%);41(G-34%,T-100%);44(A-87%,T-65%);45(G-87%,T-65%);46(A-88%,T-75%);53(C-100%,A-11%);58(A-71%,G-97%);60(C-7%,A-100%);64(C-22%,T-99%);70(C-100%);82(T-100%);83(G-100%);100(A-11%,G-100%);138(C-100%);155(G-7%,A-100%);162(G-100%);174(G-100%);189(G-47%,T-100%);196(A-8%,C-100%);200(G-100%);201(A-8%,C-100%);210(G-100%);211(A-99%,T-14%); | G;T;A/T;G/T;T/A;A/C;G;A;T/C;C;T;G;G;C;A;G;G;T;C;G;C;G;A/T | G;T;T/A;G/T;A/T;C;G;A;T/C;C/G;T;G;G;C;G/A;G;G;T;C;G;A/C;G;A |
| 281 | TCTGCTGGATTTCTATAGTAATGTTTGA | TACTGGTGATCTTCTCGGAAGGATA | 44(A-37%,T-98%);54(A-100%);56(T-100%);66(C-100%,T-15%);68(T-100%);89(C-100%);98(A-100%);103(C-100%);114(G-100%);115(C-12%,T-100%);121(C-98%,A-37%);123(A-97%,C-60%);135(C-100%,T-6%);147(T-100%);148(A-97%,G-59%);150(G-100%);157(T-100%);172(G-100%);175(C-100%);200(T-100%);207(G-100%); | A/T;A;T;C;T;C;A;C;G;T;C/A;A/C;C;T;A/G;G;T;G;C;T;G | A/T;A;T;C/T;T;C;A;C;G;T/C;A/C;C;T/C;T;G;G;T;G;C;T;G |
| 282 | CGGCAGCAGAATCTGAACGTAT | GAGGTTAGGGTTTGCATCATCTCG | 35(G-100%);36(G-6%,C-100%);45(C-100%);49(G-100%);63(G-11%,C-100%);65(C-100%);74(G-100%);104(C-100%);108(A-8%,G-100%);113(C-18%,T-98%);135(T-100%);141(G-100%);160(C-100%);182(C-99%,T-25%);199(T-100%);211(C-100%);213(C-100%);220(G-100%,T-11%); | G;C;C;G;C;C;G;C;T/G;T;T;G;C;C;T;A/C;C;G | G;C;C;G;C;C;G;C;G;T;T;G;C;C;T;C;C;G |
| 283 | GGTTTGAACACTTCAGATTGAGGAG | CATGCCCTTCTGATGGGAC | 54(A-100%);55(T-100%);57(T-100%);63(C-100%);64(C-100%);66(G-35%,A-99%);76(G-100%);83(C-99%,T-35%);85(G-100%);91(A-100%);97(C-14%,T-100%);115(A-100%);118(C-6%,T-100%);125(G-25%,C-100%);130(G-100%);137(C-12%,T-100%);145(G-100%);148(A-100%,T-6%);150(C-100%);151(G-100%);154(C-8%,T-100%);155(C-100%);156(G-12%,A-100%);157(T-100%);161(C-100%);162(C-100%);163(G-100%);169(A-13%,T-100%);180(A-12%,C-100%);185(c-100%,T-6%);186(g-100%);189(c-100%,T-9%);203(g-49%,T-99%);205(a-100%);223(C-12%,T-100%);224(G-75%,A-98%); | A;T;T;C;C;A;G;C;G;A;T;A;T;C;G;T;G;A;C/T;G;T;C;A;T;C;C;G;T;C;C;G;C;T/G;A;T;A/G | A;T/C;T;C;C;A;-/G;C;G;A;T;A;T;C;G;T;G;A;C;G;T;T/C;A;T;C/T;C/T;G;A/T;C;C/T;G;C;G/T;A;T;A |
| 284 | GGCAGGGTCAATTCCTCTACTTTTA | ACATTTCCTTAATTTAATGTGGTTTTTCT | 52(A-81%,G-32%);91(C-79%,T-34%);146(A-100%);165(C-15%,G-89%);181(G-100%);200(A-25%,G-85%);209(G-17%,C-92%);217(A-17%,T-92%); | G;T;A;G;G;G;G;A | A;C;A;G;G;G;C;T |
| 285 | CTCTTGCCTCATATCTTCAGTGTCT | TGAGGGCAAATAGTACCGATAGATG | 37(G-98%);51(C-85%,T-26%);59(G-99%);71(C-76%,T-36%);87(G-76%,A-36%);98(C-98%);100(C-100%);113(A-82%,T-18%);120(C-99%);122(A-34%,G-78%);126(T-99%);127(C-100%);136(A-78%,T-34%);142(C-78%,T-34%);153(G-19%,A-82%);154(C-99%);158(C-100%);172(C-79%,T-32%);174(C-97%,T-9%);184(C-100%);194(C-98%);215(C-57%,T-57%);220(C-95%,T-10%);228(A-12%,G-95%);229(G-98%);230(C-100%); | G;C;G;T;A;C;C;A;C;A;T;C;T;T;A;C;C;T;C;C;C;C;C;G;G;C | G;C;G;T;A;C;C;A;C;A;T;C;T;T;A;C;C;T;C;C;C;C;T;G;G;C |
| 286 | AATCTCGGTAGCTCTAAGGTCAAAG | ACCGACTGACCAAACATTAACTACT | 40(G-5%,A-66%);43(A-10%,G-98%);45(C-68%,T-79%);46(C-100%);51(A-97%,G-27%);54(C-100%);60(G-5%,A-100%);61(A-9%,G-99%);66(A-100%);67(T-100%);69(C-92%,T-44%);73(G-29%,T-97%);79(G-100%);81(G-25%,A-97%);88(C-100%);89(C-33%,A-97%);90(G-5%,C-100%);98(A-100%);120(a-97%);122(A-10%,g-94%);124(C-7%,a-96%);128(C-72%,a-63%);136(A-5%,g-97%);137(A-5%,g-97%);139(C-97%);146(G-97%,T-5%);150(G-97%);151(G-29%,C-97%);152(C-92%,T-44%);155(C-9%,A-99%);157(C-100%);158(C-97%,T-29%);162(G-79%,A-68%);169(G-95%,T-37%);171(A-100%);182(G-100%);187(G-100%);188(G-75%,T-72%);191(G-33%,A-97%);192(A-10%,G-71%,T-72%);193(A-29%,G-97%);199(T-100%);200(C-100%);208(C-29%,T-97%);212(G-100%);217(C-97%,T-30%);224(A-29%,T-97%);226(C-68%,T-79%); | -;G;T;C;A;C;A;G;A;T;C;T;G;A;C;A;C;A;A;G;A;C;G;G;C;G;G;C;C;A;C;C;G;G;A;G;G;T;A;T;G;T;C;T;G;C;T;T | -/G;G;T/C;C;A;C;G/A;G;A;T;C;T;A/G;A;C;A/C;G/C;A;-/A;G/-;A;A/C;A/G;G/A;C;T/G;G;C;C;A;C;C;G/A;G;A;G;A/G;T/G;A/G;A/G/T;G;T;C;T;G/T;C;T;T/C |
| 287 | ACGGATATCATGATTTTCTGCCTTG | CCTGATCATACAAGATAACCAGCCT | 42(A-100%);49(C-7%,A-64%,T-95%);52(C-96%,A-64%);55(A-97%,T-72%);58(A-100%);82(A-100%);90(G-99%,T-39%);105(C-100%);106(G-100%);133(C-14%,T-100%);136(A-99%,T-42%);158(G-100%);159(A-100%);166(C-64%,T-96%);177(G-6%,T-100%);184(G-100%); | A;T/A;C/A;A;A;A;G/T;C;G;T;A/T;G;A;C/T;T;G | A;A/T;A/C;T/A;A;G/A;G/T;C;G;T;A/T;G;A;C/T;T;G |
| 288 | ACTGATACAACATAAGAGGTTTCCT | CAGCATGATAGCCCAATAAACAACT | 36(A-96%,T-7%);58(C-7%,T-97%);60(C-96%,T-20%);62(G-100%,T-8%);63(A-94%,T-25%);74(G-8%,A-100%);76(C-99%,T-15%);78(G-23%,A-95%);79(C-7%,T-97%);82(C-15%,A-99%);83(G-99%,T-15%);85(A-7%,G-97%);90(A-16%,G-99%);93(G-99%);94(G-100%);95(C-99%);97(T-98%);98(C-98%,T-12%);99(C-25%,T-95%);101(G-100%);102(A-100%);105(C-25%,T-94%);108(C-100%);110(A-25%,T-94%);113(A-99%);115(C-97%,T-7%);121(G-7%,A-97%);124(C-98%);125(G-15%,A-99%);128(G-98%);129(A-100%);130(T-100%);131(A-8%,G-100%);132(G-98%,T-15%);133(A-15%,G-99%);141(C-25%,T-94%);142(A-7%,C-15%,T-96%);143(A-8%,G-100%);151(T-100%);153(C-100%,T-8%);154(T-100%);155(G-100%);157(T-98%);161(G-100%);164(A-8%,G-100%);165(C-6%,G-99%);166(G-98%);170(T-100%);174(G-98%);175(A-100%);177(A-98%);178(C-100%);179(C-74%,T-68%);181(C-9%,T-100%);182(A-7%,T-97%);183(C-99%);185(A-18%,G-99%);186(G-100%);187(A-97%);192(A-11%,G-100%);211(C-5%,T-97%);212(C-100%);213(C-99%);215(G-94%,T-23%);219(T-99%);225(C-100%);226(A-97%,T-7%);227(A-58%,G-76%);230(G-99%);233(C-97%);235(A-15%,G-99%);236(A-20%,G-98%);239(A-100%); | A;T;C;G;A;A;C;A;T;A;G;G;G;G;G;C;T;C;T;G;A;T;C;T;A;C;A;C;A;G;A;T;G;G;G;T;T;G;T;C;T;G;T;G;G;A;G;T;G;A;A;C;C;T;T;A;G;G;A;G;T;C;T;G;T;C;A;G;G;C;G;G;A | A;T;C/T;G;T/A;A;C/T;A/G;T;A/C;G/T;G;G/A;G;G;C;T;C;C/T;G;A;C/T;C;A/T;A;C;A;C;A/G;G;A;T;G;T/G;A/G;C/T;C/T;G;C/T;C;T;G;T;G;G;G;G;T;G;A;A;C;T/C;T;T;C;A/G;G;A;G;T;C;C;G;T;C;A;G;G;C;G/A;A/G;A |
| 289 | CCCCTCCATGATTTAGGAATAAGGA | ACCTGGGCTATAGGTTTGAATTCAT | 37(A-7%,C-100%);44(C-100%);45(A-100%,T-7%);50(T-100%);60(A-100%);66(A-8%,C-100%);68(T-100%);71(A-100%);73(C-7%,G-100%);86(A-100%);99(A-100%);116(G-100%);119(A-100%);122(C-100%,T-8%);123(C-100%);130(G-13%,A-99%);135(C-100%);165(A-6%,T-100%);166(G-100%);172(T-100%);183(C-100%);190(A-100%);212(A-8%,G-100%);219(C-100%);222(G-100%); | C;C;A;T;A;C;T;A;G;A;A;G;A;C;C;A;C;T;G;T;C;A;G;C;G | C;C;A;T;A;C;T;A;G;A;A;G;A;C;C;A;C;T;G;T;C;A;G;C;G |
| 290 | AAGAACAAGCGAGGAGAAAGAAGAT | GGACTGATGAACCTGGAGTTGAG | 44(G-37%,A-100%);113(T-100%);167(A-38%,G-100%);176(C-100%);188(A-100%,T-12%);195(C-100%);197(G-15%,T-100%);206(C-100%,T-8%); | A;T;A/G;C;A;C;T;C | A;T;A/G;C;A;C;T;C/T |
| 291 | TACTTGGACTCCTAATCCAAACCTC | TTGTTGTTCTGTCTTGTTCCTCTTG | 36(T-100%);46(A-100%);51(T-100%);53(G-99%);66(T-100%);69(A-14%,T-87%);71(G-16%,A-96%);80(G-95%,T-14%);88(A-56%,T-68%);89(C-9%,T-98%);92(T-100%);110(G-99%);113(A-6%,G-99%);131(C-20%,T-94%);137(A-100%);140(C-14%,G-95%);146(G-100%);153(G-100%);160(T-100%);162(A-100%);171(G-100%);172(A-100%);180(G-11%,A-97%);203(G-93%,T-22%);205(A-6%,T-98%);224(C-56%,G-70%);226(G-100%);230(A-16%,T-97%);231(A-100%); | T;A;T;G;T;T;A;G;T;T;T;G;G;T;A;G;G;G;T;A;G;A;A;G;T;C;G;T;A | T;A;T;G;T;T;A/G;G;A/T;T;T;G;G;C/T;A;G;G;G;T;A;G;A;A;G;T;G/C;G;A/T;A |
| 292 | AAGTCTGATTTTGATCTCCTTCCCC | ACCTCAATTAACGATGCCATTTGC | 36(A-100%);39(A-6%,T-100%);67(G-100%);79(C-100%);85(C-5%,T-100%);97(A-100%);121(G-100%);125(G-9%,A-100%);126(C-6%,A-100%);128(G-18%,A-100%);130(C-100%,T-22%);138(C-100%);141(A-100%);142(G-100%);143(C-31%,T-100%);144(G-100%);146(A-100%);149(A-100%,T-5%);150(G-18%,T-100%);153(A-18%,G-100%);157(A-16%,G-100%);162(G-100%);166(C-100%);167(G-100%);168(A-10%,G-99%);171(T-100%);179(A-22%,G-100%);185(C-7%,T-99%);186(T-100%);192(C-33%,T-100%);203(C-100%);206(c-100%,T-9%);225(G-100%);236(T-100%); | A;T/A;G;C;T;A;G;A;A;A;C;C/G;A;G;C/T;G;A;A;T;G;G/C;G;C/A;G;G;T/A;G;T;T;C/T;C;C;G;T/C | A;T;G;C;T;A;G;G/A;A;G/A;C;C;A;G;T/C;G;A;A;G/T;G/A;G;G;C;-/G;G;T;G;T;A/T;T;C;C;G;T |
| 293 | ATGTTTTCTGCATTTCAACCACATG | TCAACTTTCTGATGTTTCCAAACTAGT | 49(T-100%);82(A-100%);83(A-100%);84(A-100%);90(G-100%);107(C-100%);111(T-100%);161(C-94%,G-71%);184(G-100%);199(A-100%);231(G-100%,T-6%);237(C-100%); | T;A;A;A;G;C;T;G/C;G/A;A;G;C | T;A;A;A;A/G;C;T;G;G;A/G;G;C |
| 294 | CAACAACTCGCGCATCTTATCAC | ATGACCTGGCTTTGAGAGATTTGAA | 36(C-93%,T-12%);38(G-100%);43(C-94%,T-11%);44(C-99%);45(A-20%,G-89%);49(G-74%,A-41%);53(G-59%,T-54%);60(C-99%);67(G-90%,T-17%);70(C-99%);73(A-10%,G-98%);74(C-100%);78(A-10%,G-95%);85(T-100%);89(C-99%);91(A-100%);92(A-8%,G-96%);100(C-90%,T-17%);110(G-11%,T-95%);120(G-100%);124(G-98%,T-9%);127(G-100%);132(T-99%);133(G-99%);147(G-80%,C-30%);156(A-80%,G-30%);165(C-100%);170(C-80%,T-30%);171(C-89%,T-17%);172(A-80%,G-30%);182(G-94%);200(C-53%,T-59%);201(G-68%,A-50%);202(C-95%,T-11%);203(C-93%,T-14%);206(A-22%,C-88%);209(A-77%,C-39%);213(A-6%,C-97%);215(G-89%,T-20%);218(C-80%,T-30%); | C;G;C;C;G;A;G;C;G;C;G;C;G;T;C;A;G;C;T;G;G;G;T;G;C;G;C;T;C;G;G;C;A;C;C;C;C;C;G;T | T;G;T;C;G;A;G;C;G;C;G;C;G;T;C;A;G;C;T;G;G;G;T;G;C;G;C;T;C;G;G;C;A;C;T;C;C;C;G;T |
| 295 | TTGCAGGCAATAGATTTTCAAAAGC | CTGTATCCGTTGGACCAAAAAGATT | 38(C-100%);41(T-100%);44(A-14%,G-99%);49(C-100%);50(A-100%);53(T-100%);57(C-100%);65(A-99%,T-8%);71(A-8%,G-99%);87(C-100%);102(C-13%,A-100%);105(T-100%);111(G-100%);117(G-56%,A-96%);120(A-100%);140(C-15%,T-100%);141(T-100%);144(G-14%,A-99%);147(C-100%);150(A-99%,T-10%);165(C-98%,T-11%);172(T-100%);180(C-12%,A-100%);186(G-100%);192(G-100%);210(A-13%,G-99%); | C;A/T;A/G;C;A;C/T;C/T;A/T;G/A;T/C;A;T;G;A/G;A;T;T;A/G;C;T/A;C;T;A;G;G;G | C;T;A/G;C;G/A;T;C;T/A;A/G;C;A;T;G/A;G/A;A/G;T;T;G/A;C/A;A/T;C;T;A;G;G;G |
| 296 | AATTGCTTGTTCCAGTAGACAAACC | AACATTAGAGTCCAGTGAGCATCTT | 36(C-12%,T-100%);71(C-97%,T-68%);78(C-7%,T-100%);79(G-100%);80(C-49%,T-99%);84(C-100%,T-7%);85(A-10%,T-100%);88(G-15%,C-100%);131(C-11%,t-100%);132(G-10%,a-100%);152(A-16%,C-100%);154(G-100%);163(A-100%);184(C-41%,T-100%);194(C-100%,T-22%);206(A-100%,C-41%);223(A-65%,T-97%);225(A-18%,C-100%); | T;T/C;T;G;C/T;C;T;C;T;A;C;G;A;C/T;C;C/A;A/T;C | T;C;T;G;T/C;C;T/A;C;C/T;A/G;C/A;G;A;C/T;C;A/C;T;C |
| 297 | CCACCACAATAAACTTCTGAATTGC | AACAGATTCTACTACTGGACTATGTT | 47(G-18%,a-100%);50(C-21%,a-100%);54(c-100%,T-20%);55(G-99%,a-58%);58(G-100%);60(A-22%,T-100%);65(C-8%,G-100%);99(G-100%);118(A-21%,G-100%);140(C-100%);149(G-100%);152(C-100%);155(C-18%,G-100%);159(G-98%,T-58%);160(T-100%);165(T-100%);178(A-92%,T-84%);180(C-100%);181(T-100%);187(C-100%,T-24%);188(T-100%);192(C-8%,t-100%);198(c-100%,T-8%);206(t-100%);207(g-100%);208(c-100%);214(C-10%,A-100%);218(A-7%,C-100%);222(C-100%,T-20%);226(T-100%);227(C-100%);238(A-21%,T-99%); | A;A;C/T;G;G;T;G;G;G;C;G;C;G;G;T;T;A/T;C;T;C;T;T;C;T;G;C;A;C;T/C;T;C;T | A/G;A/C;C;G/A;G;T;G;G;A/G;C/T;G;C;G/C;G/T;A/T;T;T/A;C;T;C;T;T;C;T;G;A/C;A;C;A/C;T;C/A;T |
| 298 | AGACTTTAGCAACCAGGAATTCTACT | GCAGGAATTCATAGGGCTAGGAAG | 41(A-100%,T-17%);49(C-55%,T-97%);50(C-7%,T-100%);64(T-100%);65(G-6%,A-100%);67(G-100%,A-20%);68(G-100%);73(T-100%);79(C-86%,T-85%);86(A-100%,T-21%);87(C-100%);100(G-100%);111(C-100%);113(C-21%,T-100%);114(C-100%,T-21%);120(C-17%,T-100%);123(G-100%);125(A-100%,T-7%);127(C-100%);142(G-100%);144(C-100%,T-8%);145(G-100%);147(A-7%,T-100%);148(A-100%);154(G-100%);155(A-7%,C-100%);156(G-100%);157(G-100%,A-21%);163(G-26%,A-100%);164(A-8%,G-100%);165(A-7%,C-7%,G-100%);166(G-100%);167(C-99%,T-39%);171(A-100%);178(C-55%,T-97%);181(A-39%,C-99%);187(T-100%);188(C-99%,T-41%);190(C-97%,T-55%);191(C-7%,G-100%);192(T-100%);199(C-99%);205(C-97%,G-27%);208(C-8%,T-99%);212(A-99%);214(C-98%,T-18%);215(A-97%,G-27%);219(A-7%,C-100%);221(G-100%);224(T-100%);230(G-39%,A-99%);231(G-100%); | A;C/T;T;T;A/G;G;G;T;C/T;A;C;G;C;T;C;T;G;A;C;G;C;G;T;A;G;C;G;G;A;G;G/A;G;C/T;A;C/T;C/A;T;T/C;C/T;G;T;C/-;C/-;-/T;-/A;-/C;A/-;C;G;T;A/G;G | A;C/T;T;T;A;A/G;G;T;T;A/T;C;G;C;T/C;C/T;T;G;A;C;G;C;G;T;A;G;C;G;A/G;A/G;G;G;G;C;A;T/C;C;T;C;T/C;G;T;C;C/G;T;A;C;G/A;C;G;T;A;G |
| 299 | TTCGGATTAAAGAATGGTGCAGATG | CCCAAATAATTTTCCTCAGGCAGAA | 36(C-22%,A-100%);40(A-100%);43(A-89%,T-66%);46(C-12%,G-99%,T-40%);48(C-22%,A-100%);52(A-100%);75(A-99%,T-22%);78(C-11%,A-99%);80(A-100%);82(A-88%,T-73%);85(A-100%);92(C-12%,T-100%);93(C-100%);95(G-8%,A-100%);97(C-100%);101(T-100%);125(A-81%,G-86%);133(C-100%);139(C-100%);155(T-100%);159(A-100%);163(A-99%,G-40%);168(G-7%,C-100%);170(A-100%);172(A-100%);174(A-100%);177(A-15%,G-100%);181(C-100%);189(T-100%);193(G-100%);198(C-7%,T-100%);205(C-100%);213(G-25%,C-97%);216(T-100%); | A;A;A;G;A;A;A;A;A;A;A/G;T;C;G/A;C;T;A;C;C;T;A;A;C;A;A;A;G;C;T;G;T;C;C;T | A/C;A;A;G/T;C/A;A;A/T;A;A;A;A;C/T;C;A;C;T;A/G;C;C;T;A;G/A;G/C;A;A;A;G/A;C;T;G;T;C;C;T |
| 300 | GCTTCTTAATGTCCTTGAACAGGTA | AGTCTTACAAAAACTTAGCAATGGA | 37(G-100%);42(T-100%);54(G-100%);56(G-30%,A-100%);59(T-100%);60(C-100%);66(A-100%,T-30%);68(G-34%,T-100%);72(A-8%,T-100%);73(G-100%,T-9%);83(G-19%,T-100%);87(G-100%);91(T-100%);95(C-100%);102(A-22%,G-99%);103(T-100%);136(C-21%,T-100%);142(A-100%);159(T-100%);169(C-74%,A-95%);170(G-100%);172(C-100%);178(G-100%);185(A-100%);194(C-100%);201(A-22%,g-99%);204(A-19%,g-99%);206(G-6%,a-100%);208(t-100%);216(t-100%);231(C-98%,T-38%);236(T-100%); | G;T;G;A;T;C;A;T;T;G;T;G;T/G;C;G;T;T;A;T;A/C;G;C;G;A;C;G;G;A;T;T;C;T | G;T;G/A;A/G;T;C;A/T;G/T;T;G/T;T;G;T;C;G/-;-/T;C/T;A;T;A;G;C;G;A;C;G;G;A;T;T;C;T |
| 301 | AACCATGAAGAGAGAGGTGTAAGTC | TGCTTGACTATCACAAATCATCTGC | 36(T-100%);44(G-99%,A-10%);51(A-99%,C-10%);57(G-42%,C-99%);58(C-100%);62(A-100%);71(A-100%);81(G-42%,A-99%);82(C-100%,T-8%);87(T-100%);99(G-100%);107(A-97%,G-47%);148(T-100%);168(C-7%,A-100%);172(C-99%,G-9%);173(C-100%);181(C-100%);182(A-100%);183(G-99%,T-10%);197(A-98%,T-9%);208(G-100%);214(G-99%,A-10%);217(A-100%,T-12%);223(G-6%,C-100%); | T;A/G;C/A;C;C;A;A;A;C;T;G;G/A;T;A;G/C;C;C;A;T/G;A;G;A/G;A;C | T;A;C;C;C;A;A;A;T;T;G;G;T;A;G;C;C;A;T;A;G;A;A;C |
| 302 | GAAGAACTATTACGAGGTTGGGAGC | GCACTAGAATCAAATCACCGTGAG | 37(C-100%);41(G-100%);52(A-15%,G-100%);57(C-100%);58(T-100%);76(G-100%);88(A-100%);99(A-100%);106(T-100%);112(G-99%,T-19%);128(C-100%);131(A-6%,G-100%);133(C-100%,T-10%);146(C-100%);151(C-100%);154(C-100%);157(T-100%);160(C-5%,G-100%);181(A-100%);184(A-100%);194(A-100%);202(A-11%,G-100%);221(C-99%,A-25%);222(C-100%);223(A-18%,G-99%);229(T-100%);236(A-14%,G-100%);237(G-100%); | C;G;G;C;T;G;A;A;T;G;C;G;C;C;C;C;T;G;A;A;A;G;A/C;C;G;T;G;G | C;G;G;C;C/T;G;A;A;T;G;C/T;G;C;T/C;C;C;T;G;A;G/A;A/C;A/G;C/A;C;G;T/C;G;G |
| 303 | CTGATTGAAGAATTAGACGGCAGTG | AATTACCTAATGTTGGCCAACCTTG | 37(C-55%,A-77%);45(G-45%,C-85%);53(C-90%,T-28%);72(a-90%,T-30%);92(C-30%,A-90%);97(A-98%,T-17%);99(G-28%,A-90%);101(a-100%);119(c-100%);126(T-100%);131(T-100%);134(C-85%,T-47%);150(A-55%,G-77%);152(G-100%);155(C-100%);158(G-100%);160(C-93%,T-14%);173(A-55%,T-77%);175(T-100%);194(A-55%,T-77%);198(A-96%);199(T-100%);204(C-13%,t-93%);224(t-100%);229(g-100%);230(C-100%);231(A-96%);232(T-100%);235(A-100%); | A/C;C;C;A;A;A/T;A;A;C;T;T;C/T;A/G;G;C;G/A;C;T/A;T;A/T;A;C/T;T;T;G;C;A;T;A | A;C;T;T;C;A;G;A;C;T;T;C;G;G;C;G;T;T;T;T;A;T;C;T;G;C;A;T;A |
| 304 | CGGATCAAGGTATGCACTAAAAATT | TTCTCTTCTGAGGACTTGAGACAG | 80(t-100%);82(a-100%);110(A-100%);126(T-100%);127(A-97%,T-28%);129(C-100%);226(G-40%,A-99%);230(G-13%,T-100%); | T;A;A;T;A/T;C;A;T | T;A;A;T;A;C;A;T |
| 305 | AGGGGATGGTCATGTCAATAACTAC | ACTCAACTGAACTATGACTGTTCCA | 44(C-13%,G-100%);51(A-100%);61(A-100%,C-38%);62(A-100%,T-13%);67(C-100%);69(A-8%,T-100%);71(C-100%);80(C-18%,G-100%);85(G-13%,C-100%);90(A-100%);93(G-100%);94(G-100%);95(A-100%);98(C-100%);99(C-13%,T-100%);103(C-100%);108(T-100%);126(C-21%,T-100%);132(A-100%);133(C-100%);137(G-100%,T-38%);139(G-15%,C-100%);145(C-100%,T-18%);147(A-100%);152(T-100%);155(A-100%);157(G-100%,C-46%);160(T-100%);164(A-100%);166(G-14%,A-100%);175(C-15%,T-100%);176(C-13%,A-100%);179(G-100%);182(A-100%);184(A-100%);185(T-100%);192(A-100%);204(A-100%);206(A-30%,G-100%);207(G-15%,C-100%);215(T-100%); | G;A;A;A;C;T;C;G;C;A;G;G;A;C;T;C;T;T;A;C;G;C;C;A;T;A;G;T;A;A;T;A;G;A;A;T;A;A;G;C;T | G;A;A/C;A;C;A/T;C;C/G;C;A;G;G;A;C;T;C;T;T/C;A;C;T/G;G/C;C/T;A;T;A;C/G;T;A;A;T/C;A;G;A;A;T;A;A;G;G/C;T |
| 306 | TCCAAAATAAAAATTACAGAGCAATTTGA | TATCGGCAATACAGTTTCTGCAATG | 68(A-100%);81(A-100%);99(A-100%);102(A-100%);105(A-6%,T-100%);123(C-100%);141(A-94%,G-66%);177(G-100%);183(T-100%);225(G-100%); | A;A;A;A;T;C;A/G;G;T;G | A;A;A;A;T;C;A;G;T;G |
| 307 | ACAAACAACACATTCTTTTCCTGGA | AGAGATATACCCTCTGGCAATCAG | 67(C-100%);78(T-100%);87(G-100%);88(C-100%);89(C-100%);94(G-100%,T-28%);109(G-100%,T-7%);121(T-100%);123(C-100%);130(T-100%);151(T-100%);152(A-5%,T-100%);163(T-100%);169(T-100%);174(C-100%);175(T-100%);181(A-100%);182(T-100%);184(G-100%);187(C-83%,G-89%);190(C-100%,T-6%);193(T-100%);194(A-7%,G-100%);215(A-29%,G-99%);216(A-10%,G-100%); | C;C/T;G;C;C;G;G;T;C;T;T;T;T;T;C;T;A/C;T;G;G/C;C;T;G;G;G | C;T;G;C;C;G;G;T;C;T;T;T;T;T;C;T;A;T;G;G;C;T;G;A/G;G |
| 308 | GCTTTATGCGGTAGACCTTTTT | TTTGAATAAATTTAAATGATGTGTAATTCATGA | 45(A-64%,C-13%,g-11%);68(c-73%,T-48%);69(C-48%,t-73%);73(c-11%,T-99%);81(G-100%);85(A-100%);118(A-99%,G-11%);180(A-13%,T-98%);182(A-100%);203(C-99%,T-21%);206(C-100%);209(T-100%);220(C-13%,T-100%); | G;C;T;C;A;A;G;T;A;C;C;T;T | C/-;C/T;T/C;T;G;A;A;T;A;T/C;C;T;T/C |
| 309 | GAAAGCATAGCATGAAATGGGAAGT | CAGTTTTGTTCTGTTTTAATGCGCA | 42(C-12%,T-98%);49(A-9%,T-100%);59(C-100%);62(T-100%);67(C-98%,T-25%);76(C-5%,G-100%);79(A-11%,C-99%);82(A-9%,G-100%);84(C-100%);86(T-100%);87(A-100%);99(A-9%,G-93%,t-31%);114(t-100%);115(c-100%);127(G-100%);135(t-100%);141(c-100%);150(g-100%);160(C-100%);165(G-49%,A-90%);167(C-99%);168(A-22%,G-99%);171(A-100%);185(C-100%);186(A-31%,T-94%);188(C-9%,T-99%);191(T-100%);192(G-100%);207(C-100%);208(A-58%,G-82%);209(C-98%);217(C-100%);220(A-83%,T-54%);221(G-25%,A-98%);224(A-100%); | T;T;C;T;T/C;G;C;G;C;T;A;G/T;T;C;G;T;C;G;C;A;C;G;A;C;A/T;T;T;G;C;G;C;C;A;A/G;A | C;T;C;T;C;G;C;G;C;T;A;T;T;C;G;T;C;G;C;A;C;G;A;C;A;T;T;G;C;G;C;C;A;A;A |
| 310 | ATCGAGGAAAGTTTCTCGCTCGATC | CCTCATTGTTTCTGCAGAATGGATG | 40(G-100%);42(G-100%);46(A-100%);52(T-100%);58(T-100%);61(G-60%,A-100%);73(A-12%,G-100%);88(G-11%,T-100%);103(T-100%);112(A-10%,G-100%);120(C-100%);134(C-100%);139(A-100%);150(A-100%);153(C-12%,A-100%);158(G-100%);159(C-16%,T-100%);163(G-100%,T-22%);169(A-100%);174(T-100%);180(C-100%);190(T-100%);191(G-100%);209(G-100%);214(T-100%);216(G-100%);220(T-100%);222(T-100%);226(G-75%,T-97%);232(C-33%,G-100%); | G;G;A;T;T;A;G;T;T;G;C;C;A;A;A;G;T;T/G;A;T;C;T;G;G;T/C;G;T;C/T;T;C/G | G;G;A;T;T;A;A/G;T/A;G/T;G;C;C;A;A;A;G;T/C;C/T/G;A;T;C;T;G/C;G/C;T;G;T;T;T/G;G |
| 311 | ATAGGTAATGGATAGGTTTCGCGTT | CGCAGCTTCACAGTGCATTTTT | 60(G-20%,T-98%);61(C-100%);63(A-15%,G-99%);66(T-100%);68(G-100%);70(C-98%,G-20%);77(A-100%);81(G-98%,A-20%);90(A-15%,T-99%);94(A-33%,C-99%);108(C-8%,G-100%);109(G-20%,T-98%);110(G-100%);137(A-77%,G-85%);144(G-100%);184(C-85%,T-77%);188(A-11%,C-100%);219(G-99%);223(G-100%); | T/G;C;G;T;G;C/G;A;A/G;T;C;G;T/G;G;G;G;C;C;G;G | T/G;C;G;T;G;C/G;A;G/A;T;C;G;T/G;G;G/A;G;C/T;C;G;G |
| 312 | CTCGGCAACCCAACATTTCATTT | AGATAGCCAAATTTCTCACATCCCT | 43(C-89%,T-63%);62(A-11%,G-100%);83(T-100%);89(C-100%);91(C-97%,T-35%);93(G-33%,A-97%);94(A-97%,G-35%);101(G-100%);103(C-100%);104(G-63%,A-89%);111(A-13%,G-99%);114(G-78%,A-81%);121(C-100%,T-5%);125(G-97%,A-35%);136(C-98%,T-24%);138(G-100%);169(A-100%);171(A-97%,G-35%);197(A-97%,G-35%);203(G-78%,C-81%); | T/C;G;T;C;C;A;A;G;C;A/G;G;G/A;C;G;C;A/G;A;A;A;C/G | C/T;G;T;C;C;A;A;G;C;A/G;G;A/G;C;G;C;G;A;A;A;C/G |
| 313 | GGGAGGCTGAACAAGGGAAT | TGAGATTAGGAGAAATCAACTACATGA | 31(T-100%);35(C-27%,T-100%);41(G-27%,A-100%);54(C-100%);56(A-100%);62(T-100%);66(G-99%,A-20%);72(A-24%,G-100%);106(A-8%,G-100%);108(A-27%,G-100%);109(C-100%);119(A-27%,G-100%);124(A-100%,T-27%);128(C-100%);139(A-100%);142(C-100%,T-13%);149(G-100%);180(C-81%,A-81%);187(G-6%,A-100%);191(C-100%,T-28%);195(A-100%);202(A-99%,G-44%);203(T-100%);217(G-81%,T-83%); | T;T;A;C;A;T;G;G;G;G;C;G;A;C;A;C;G;A/C;A;C;A;A;T;T/G | T;T/C;A/G;C;A;T;G;G/A;G;G/A;C;G/A;A/T;C;A;C;G;A;A;T/C;A;G/A;T;G |
| 314 | CATGAAGGCATGCATTTAATGAAA | ATGCTTGAGATGTTATTCTTTCGCA | 43(T-100%);45(C-100%);46(G-12%,C-100%);55(A-100%,T-17%);67(A-99%,G-20%);68(G-100%);80(A-100%);88(T-100%);97(G-35%,T-99%);116(G-100%);128(A-100%,T-15%);130(G-17%,A-100%);138(C-99%,T-20%);150(G-100%);156(G-100%);161(C-100%,T-17%);188(C-100%);201(C-100%);204(A-12%,T-100%);213(A-97%,T-49%);215(G-99%,C-17%); | T;C;C;A;A;G;A;T;T;G;A;A;C;G;G;C;C;C;T;A;G | T;C;C;A;G/A;G;A;T;T;G;A;A;C/T;G;G;C;C;C;A/T;A;G/C |
| 315 | TATTCACTTGATTCTGCACTGGATG | GAATAAGTGGCACTTCAACAAATAAT | 46(A-9%,G-99%);47(G-100%);62(G-99%);69(C-99%);72(C-100%);96(A-39%,T-96%);107(C-39%,T-97%);118(G-5%,A-99%);121(G-98%,A-34%);144(C-34%,T-98%);169(A-99%,T-9%);198(C-100%);208(A-9%,T-99%);209(G-99%,T-9%); | G;G;G;C;C;A;C;A;G;T;A;C;T;G | G/A;G;G;C;C;A/T;C/T;A;G/A;C/T;T/A;C;A/T;T/G |
| 316 | TGACCTATGTTTCTCCAGGTCAAAA | AATGCTGTTTGTGACCACATTTGAT | 62(A-99%,G-18%);68(G-13%,A-99%);76(T-100%);79(G-100%);88(A-100%);92(A-100%);93(A-100%);100(A-100%);102(C-100%);103(A-100%);104(G-100%);106(A-99%,C-29%);117(T-100%);123(A-100%);124(C-100%);134(C-100%);147(C-7%,T-100%);150(G-7%,A-100%);157(A-100%);171(T-100%);173(A-7%,G-100%);183(A-100%);187(C-100%);190(G-12%,A-100%);191(T-100%);198(T-100%);199(C-100%);202(G-37%,A-99%);203(G-100%);221(A-100%);222(t-100%);223(A-98%,g-19%);225(a-100%);229(a-100%);230(A-8%,t-100%); | G/A;A;T;G;A;A;A;A;C;A;G;A;T/C;A/C;C;C;T;A;A;T;G;A;C;A;T;T;C;A;G;A;T;A/G;A;A;T | G/A;A;T;G;A;A;A;A;C;A;G;A/C;T;A;C;C;T;A;A;T;G;A;C;A;T;T;C;A;G;A;T;G/A;A;A;T |
| 317 | ACCCAGGCAAGCAATATAATAGTTTAC | ACTCTGCAAGTGTGGTATATTCACT | 51(g-99%);89(G-100%);94(T-100%);120(G-100%);140(a-100%);141(A-78%,t-33%);142(a-99%);149(a-100%);167(G-100%);172(G-93%,T-14%);188(C-23%,A-86%);191(T-100%);197(A-100%);199(G-27%,A-91%);205(A-43%,T-80%);207(G-100%);210(C-100%);212(C-100%);213(A-100%);214(G-100%);217(A-86%,G-24%);235(a-100%); | G;G;T;G;A;T;A;A;G;G;A;T;A;A;T;G;C;C;A;G;G;A | G;G;T;G;A;A/T;A;A;G;G;A/C;T;A;A;T;G;C;C;A;G;G/A;A |
| 318 | TAAGCAGAAACTCACATGTTCTGT | GCTCTGTTTTGAAGCGATTTATTGA | 41(G-99%,T-27%);73(C-96%,T-62%);151(G-95%,A-75%);164(G-100%);185(G-46%,A-99%);187(A-27%,G-99%); | G;C;G/A;G;A;G | G;T;G;G;A;G |
| 319 | TGCATTTTCTGTTCAACATAAAACAT | ACCTCTTATTGGAAAGTTTCGTGTT | 40(C-100%,T-6%);47(G-100%);52(G-99%,T-56%);60(C-5%,A-100%);62(G-100%);64(T-100%);71(T-100%);117(A-100%);138(A-20%,G-100%);147(G-11%,A-100%);162(A-100%);183(G-11%,C-35%,T-99%);184(G-100%);186(C-100%,T-6%);189(A-20%,T-100%); | C;G;G/T;A;G/T;T;T;A;G;A;A;T/C;G;C;T | C;G;T/G;A;G;T;T;A;G;A/G;A;G/T;G;C;T |
| 320 | TCAACCAACCAACTTGAATTCTACT | AAATGATGATGGTTTGAGATCACCC | 42(T-100%);43(G-100%);45(A-100%);46(T-100%);59(C-100%);63(C-100%);69(t-100%);74(c-100%);77(C-100%,t-11%);86(g-100%);125(A-97%,c-56%);132(C-97%,t-56%);134(g-100%);137(C-100%,T-7%);142(c-98%,T-47%);164(C-100%);165(C-47%,T-98%);166(G-100%);167(G-47%,A-98%);173(C-97%,A-55%);178(A-7%,G-100%);179(A-19%,G-100%);180(C-100%,T-13%);184(G-100%);199(C-100%);206(G-100%);209(A-100%);215(G-100%);216(C-90%,T-81%);228(G-47%,T-98%);230(T-100%); | T;G;A;T;C;C;T/C;C;C;G;A/C;T/C;G;C;C;C;T;G;A;C;G;G;C/T;A/G;T/C;G;A;G;C;T;T/G | T;G;A;T;C;C;T;C;C;G;A;C;G;C;C;C;T;G;A;C;G;G;C;G;C;G;A;G;T;T;T |
| 321 | AACCATGAATTTGGCATAGGTGTTT | GCTCACCATCATCTGTAAGATACCA | 39(G-6%,A-100%);40(G-19%,A-100%);41(C-100%);42(C-100%);61(A-6%,G-100%);62(A-10%,T-100%);63(A-6%,G-100%);80(T-100%);86(C-31%,G-100%);89(G-100%);102(A-100%);104(C-20%,T-100%);111(A-34%,G-100%);115(G-100%);120(C-100%);130(A-100%,T-20%);150(G-100%);151(A-100%);154(A-100%);157(C-10%,T-100%);162(C-100%);164(T-100%);165(A-7%,T-100%);169(A-100%,G-44%);172(C-100%,G-44%);175(C-31%,G-100%);192(G-100%);199(G-31%,C-100%);200(C-31%,T-100%);201(G-100%,A-5%);208(G-100%);209(G-100%,T-20%);217(C-100%); | A;A;C;C;G;T;G;T;G;G;A;T;G;G;C;T/A;G;A;A;T;C;T;T;A/G;G/C;G;G;C;T;G/A;G;T/G;C | A;G/A;C;C;G;T;G;T;C/G;G;A;C/T;G;G;C;T/A;G;A;A;T;C;T;T;G/A;C/G;G/C;G;G/C;C/T;G;G;T/G;C |
| 322 | TTATTTCGAGCTGACCAAGTTGCAG | TTGAAGCAGTTCTCTACTTCGGAAG | 36(C-23%,T-100%);50(C-100%,T-10%);59(C-100%);82(C-6%,A-100%);143(G-100%);148(T-100%);170(C-33%,A-100%);176(G-10%,A-100%);182(A-100%);188(A-100%);215(T-100%);218(T-100%);219(T-100%);233(C-93%,G-81%); | C/T;C;C;A;G;T;A;A;A;A;T;T;T;G | T;T/C;A/C;A;G;T/C;A;A/G;A;A;T;T;T;C/G |
| 323 | GCTGCAATAATACGTACCAGATGG | TGCACTGGTATGGACTTCCTTTTAT | 35(A-7%,G-100%);44(T-100%);62(C-49%,G-99%);69(G-100%,T-5%);75(A-100%,c-22%);78(t-100%);112(A-100%);119(C-49%,T-99%);126(G-100%);129(C-21%,G-100%);131(A-9%,T-100%);144(C-100%);156(G-100%);161(T-100%);198(G-100%);204(A-16%,C-100%);208(A-100%);209(A-7%,C-100%); | G;T;G;G;A/C;T;A;T;G;G;T;C;G;T;G;C;A/T;C | A/G;T;G;G;C/A;T;A;T;G;G;T;C;G;T;G;C;A;C |
| 324 | TCAGTCTGCTGCTCCCAGTA | ATGAAGCTTTATACCTCTCAGCCTT | 40(T-100%);46(G-100%);100(C-100%);106(C-15%,T-100%);121(T-100%);126(A-98%,G-56%);127(A-100%);166(T-100%);173(G-100%);180(T-100%);185(G-15%,T-100%);187(G-25%,A-100%);193(A-100%);200(A-100%);202(c-100%);205(t-100%);216(c-100%);217(a-100%);218(g-100%);224(G-31%,A-100%);225(G-100%);227(A-100%);232(C-100%,T-5%); | T;G;C;T;T;A/G;A;T/G;G;T;T;A;A;A;C;T;C;A;G;A;G;A;C | T;G;C;T;T;A;A;T;G;T;T;A;A;A;C;T;C;A;G;A;G;A;C |
| 325 | TGCAATCGCTTGAACTTTTCTGTAA | GCCTCCATAGAGTTAATGAGTGGTT | 40(A-25%,C-100%);44(C-100%);47(T-100%);48(A-100%);53(C-100%);55(T-100%);57(G-100%);60(C-100%,T-15%);67(C-100%,T-9%);73(T-100%);76(G-100%,T-16%);78(A-6%,C-100%);85(C-66%,A-94%);88(G-13%,A-100%);90(A-99%,G-28%);92(T-100%);100(G-100%);103(G-100%);105(A-6%,G-100%);110(G-100%);111(T-100%);117(C-15%,T-100%);118(G-98%,A-51%);127(C-15%,T-100%);140(C-15%,T-100%);143(C-13%,G-100%);155(A-98%,T-46%);157(C-100%);166(A-100%,T-8%);172(T-100%);178(C-100%,T-19%);179(G-100%);181(C-100%,T-37%);182(C-100%,T-13%);183(G-100%,T-6%);190(A-100%);202(A-15%,G-100%);210(G-15%,A-100%);214(A-13%,T-100%);220(A-100%);222(C-100%);227(G-100%);232(A-100%); | C/A;C;T;A;C;T;G;C;C/T;T;G;C;A/C;A;A;T;G;G;G;G;T;T;G/A;T;T;G;T/A;C;A;T;T/C;G;T/C;C;G;A;G;A;T;A;C;G;A | C;C;T;A;C;T;G;T/C;C;T;T/G;C;A;A/G;A/G;T;G;G;G;G;T;T/C;G/A;C/T;T/C;G/C;A/T;C;A;T;C;G;T/C;C/T;G;A;A/G;A/G;T/A;A;C;G;A |
| 326 | ACACCAAAAAGATCATAATGTTCTGTGA | CTCTGGTGTTGGTGAATTCAGTAAT | 92(G-8%,A-100%);99(T-100%);101(G-95%,A-50%);158(C-100%,A-19%);161(T-100%);164(G-100%);169(G-19%,A-100%);171(C-100%);172(C-100%);200(C-100%); | A;T;G;C;T/C;G;A;C;C;C | A;T;G;C;T;G;A;C;C;C |
| 327 | TGCAAAAGGTCAGCTATTGTAGAAC | GGATTGCGAATTCCCAAAAGTATTG | 50(t-100%);52(C-17%,a-100%);55(t-100%);58(C-100%);61(A-41%,G-100%,T-18%);69(G-100%);79(A-100%);87(C-18%,T-100%);92(A-12%,C-19%,T-100%);94(G-8%,T-100%);96(G-100%);98(A-100%,T-18%);107(A-19%,G-100%);116(T-100%);122(A-100%,T-19%);135(G-100%,T-24%);143(C-100%);146(A-100%);149(C-100%,T-19%);162(G-100%);166(C-100%);190(G-100%);200(A-9%,C-100%);201(C-19%,T-100%);214(C-100%);216(G-100%);218(C-7%,T-100%);231(C-100%);232(T-100%); | T;A;T;C;G/A;G;A;T;T;T;G;A;G;T;A;T/G;C;A;C;G;C;G;C;T;C;G;T;C;T | T;A/C;T;C;T/G;G;A;C/T;T/C;T;G;T/A;A/G;T;T/A;G;C;G/A;T/C;G;C;G;C;T/C;C;G;T;C;T |
| 328 | TTCAATTCATAGCATTCCAAGGTGG | ACATATGTGCTCGATATCTAGTGCG | 40(A-18%,T-98%);43(C-100%);47(c-99%,T-8%);51(C-27%,t-98%);59(C-8%,a-100%);60(a-100%,T-10%);77(T-100%);115(A-100%);130(A-99%);151(C-99%);171(C-99%);172(A-98%,G-18%);177(C-35%,T-95%);181(A-96%,T-26%);190(A-26%,G-96%);235(C-6%,T-100%); | T;C;C;T;A;A;T;A;A;C;C;A;C/T;A;G;T | T;C;C;T;A;A;T;A;A;C;C;A;T;A/T;G/A;T |
| 329 | AAAAACAAGAAGGTTGGCCTCATC | GGCTATTAAATTCTATTTTTACACTAATATGATGC | 37(G-6%,C-100%);40(A-86%,G-58%);48(G-93%,A-27%);49(T-99%);50(A-7%,G-94%,T-38%);54(C-6%,T-100%);57(C-100%);58(C-60%,T-85%);61(C-99%);63(G-6%,T-99%);69(C-96%,T-39%);70(G-100%);72(C-98%,T-8%);74(G-94%,A-21%);78(T-99%);79(T-99%);84(C-100%);85(A-85%,C-60%);88(C-60%,T-85%);92(C-96%,T-38%);101(A-94%,G-27%);126(C-100%,T-6%);130(A-100%,T-6%);131(C-6%,T-100%);137(A-98%,G-8%);146(C-96%,T-38%);148(A-98%,G-8%);151(A-100%);153(C-16%,T-96%);155(G-94%,T-27%);157(C-99%,T-7%);160(A-6%,G-100%);163(C-100%);164(A-100%);171(G-97%,A-11%);183(A-11%,G-98%);187(C-98%,T-11%);192(A-98%,T-8%);194(A-85%,C-60%);202(G-38%,C-96%);203(C-99%);206(A-8%,T-98%);209(G-6%,A-100%);210(T-100%);215(A-38%,G-96%);216(G-100%);221(C-53%,T-90%);222(C-6%,G-97%,A-7%); | C;A/G;A/G;T;G;T;C;C/T;C;T;C;G;C;G;T;T;C;A/C;T/C;C;A/G;C;A/T;T;A;C;A;A;T;G/T;C/T;G;C;A;G;G/A;T/C;A;A/C;C;C;T;A;T;G;G;T;G | C;G/A;G/A;T;A/G;T;C;T/C;C;T;C;G;T/C;G/A;T;T;C;C/A;T/C;C;A/G;C;A;T;A/G;C;A/G;A;C/T;G/T;C;G;C;A;A/G;G;C;A/T;C/A;C;C;A/T;A;T;G;G;C/T;G/A |
| 330 | TGAGTTTATAATTTGTTGCGGGTCC | AGCTGTTGAACTTAATGAGCTTTGT | 42(A-100%);43(A-25%,G-94%);55(G-36%,T-98%);68(A-90%,G-38%);96(G-97%,A-14%);97(T-100%);99(T-100%);101(A-96%,T-15%);103(A-97%,G-14%);107(C-9%,T-100%);118(A-38%,T-90%);134(G-100%);137(C-14%,T-97%);149(A-94%,T-25%);167(T-100%);175(C-100%);177(A-25%,T-94%);180(A-100%);181(C-100%);182(C-97%,T-14%);187(C-100%);196(A-100%);200(C-94%,T-25%);221(A-14%,T-96%);227(G-100%);228(G-25%,A-94%);235(G-100%); | T;G;T;G;G;C;T;T;A;T;A;A;T;A;C;T;T;A;T;C;T;A;C;C;G;A;G | A;G;T/G;G/A;A/G;T;T;A/T;A/G;T;A/T;G;C/T;A;T;C;T;A;C;C/T;C;A;C;T/A;G;A;G |
| 331 | GCATTTTCTATGGTGGAGGCATAAA | AGTTATTTGTGGCAATCTGAAGCTC | 38(A-100%);66(G-100%);72(A-100%);73(C-37%,T-100%);74(C-100%);78(C-100%);87(A-100%);88(A-18%,T-100%);92(A-8%,T-100%);93(T-100%);95(A-100%,T-9%);101(C-100%,T-23%);102(A-100%);111(A-100%);112(C-100%);120(C-23%,T-100%);121(C-100%);122(A-23%,C-100%);131(C-22%,T-100%);134(G-23%,A-100%);137(G-100%);138(G-100%);144(G-11%,a-100%);148(a-100%);149(G-7%,a-100%);150(C-22%,t-100%);159(A-12%,c-100%);166(C-7%,T-100%);169(C-100%);177(T-100%);182(A-9%,G-100%);186(C-100%);190(A-9%,C-100%);195(A-23%,C-100%);196(A-8%,C-9%,G-100%);202(G-100%);210(T-100%);219(G-100%);225(G-100%); | A;G;A;T;C;C;A;T;T;T;A;C;A;A;C;T;C;C;T;A;G;G;A;A;A;T;C;T;C;T;G;C;C;C;G;G;T;G;G | A;G;A;T;C;C;A;T/A;T;T;A;C/T;A;A;C;C/T;C/A;C/A;T/C;G/A;G;A/G;A;A;G/A;T/C;C;T;C;T;G;C;C;A/C;G;G;T;G;G |
| 332 | ACGTACCAGCAGACCATAAATATCA | GCTGCATATCTCAGTTTTGCAGATT | 43(A-12%,T-100%);55(C-100%);64(A-7%,T-100%);65(C-100%);70(A-100%);81(T-100%);109(t-100%);120(A-17%,T-100%);138(A-47%,G-100%);139(T-100%);141(G-100%,T-12%);145(C-19%,A-100%);186(C-100%);188(C-99%,T-40%);193(A-17%,G-100%); | T;C;T;C;A;T;T;T;A/G;T;G/T;A;C;C;G | T;C;T;C;A;T;T;T/A;G;T;G;A/C;C;C;A/G |
| 333 | GAACTTTGTTGGTGCATTGTTAGGG | AGAAGAATAAAGGAACATGGCAACG | 40(C-15%,T-100%);41(G-7%,A-100%);42(A-100%);43(A-100%);49(A-10%,g-100%);87(C-100%,T-12%);88(T-100%);91(G-46%,T-99%);132(C-100%);137(C-100%,T-8%);139(A-100%,G-10%);154(G-17%,a-100%);175(C-8%,t-100%);181(A-12%,T-100%);190(T-100%);235(C-11%,A-100%);238(G-12%,A-100%); | T;A;A;A;G;C;T;G/T;C;C;G/A;A;T;T;T;A;A | T;A;A;G/A;G;C/T;T;G/T;G/C;C;A;A;T/C;T;T;A;A |
| 334 | GCAGCAGCATCTCTAGTGAAAAATT | TGCCATTATTAAATGTTGCATGGGT | 38(T-100%);39(T-100%);40(A-100%);45(A-100%);48(C-12%,A-100%);60(A-12%,G-100%);82(G-6%,C-99%);99(G-100%);108(A-17%,T-100%);112(C-15%,A-100%);124(C-100%);125(C-100%);131(G-8%,T-100%);140(C-8%,T-100%);141(G-100%);142(G-35%,T-100%);164(A-100%);170(G-100%,T-22%);172(C-12%,G-100%);176(C-100%,T-35%);181(C-100%,T-15%);192(G-100%);194(C-100%);217(T-100%);218(C-9%,G-100%);221(C-100%); | T;T;A;A;A;G;C;G;T;A;C;C;G/T;T;G;G/T;A;T/G;G;T/C;C;G;C;T;G;C | T;T;A;A;A;A/G;C;G;T/A;A;C;C;T;T;G;T/G;A;G;G;T/C;T/C;G;C;T;G;C |
| 335 | CTCAACCAAACAAAATTGAATGATAAATT | CTGGTGAGTTAATTTGATTGTGGGA | 44(t-100%);47(a-100%);51(c-100%);56(A-100%);58(T-100%);61(T-100%);64(G-100%);73(A-100%);89(A-27%,T-100%);95(g-100%);105(t-100%);115(C-100%);117(A-14%,G-100%);124(C-100%);128(C-31%,T-100%);142(A-100%,G-26%);144(A-16%,T-100%);151(T-100%);157(G-100%);160(C-100%,T-6%);172(G-31%,A-100%);187(T-100%);193(C-100%);194(A-6%,G-100%);205(A-100%,T-25%);221(t-100%);235(T-100%);237(C-100%,T-25%); | G/T;A;C;A;T;T;G;A;T/A;G;T;C;G;C;T;G/A;T;G/T;G;C;A;T;C;G;A;T/C;T;C | T;A;C;A;T;T;G;A;T;G;T;C;G;C;T;A/-;A/T;T;G;C;A;T;C;G;A;T;T;C |
| 336 | CAAACCCAGTTATCTGCATTCTCAG | ACTGATTTGTACTTGTAGATTTTGTATTCA | 45(C-100%);57(T-100%);78(C-100%);79(C-6%,G-100%);83(G-100%);141(A-21%,G-100%);149(C-100%);150(G-100%);160(G-100%);163(C-25%,T-99%);179(C-100%);185(C-73%,T-97%);194(A-100%);202(C-53%,T-97%);211(a-100%); | C;T;C;G;G;G;C;G;G;C/T;C;T;A;T;A | C;T;C;G;G;G;C;G;G;T;C;T;A;T;A |
| 337 | AAGCCTCTGCATTACTCACTTCTTT | CATGGAAAGATCGAAAACCAAAGGT | 43(C-23%,T-99%);44(A-13%,G-100%);47(T-100%);65(T-98%);80(C-100%,T-7%);98(C-100%);112(A-100%);113(A-46%,G-92%);122(C-100%);125(A-14%,G-92%);137(A-100%);140(A-100%);141(C-14%,T-92%);160(A-10%,T-94%);164(G-100%);220(C-100%,T-14%);228(T-100%); | T;G;T;T;C;C;A;G;T/C;A/G;A;A;T;T;G;C;T | T;G/A;T;T;C;C;A;G/A;C;G;A;G/A;T;T;G;C/T;T |
| 338 | ACATAGGATTCGAGTGTTATGTATGT | AAGGAGAAAGAGTGAGAAGAGAAGG | 38(a-100%);43(T-100%);48(A-79%,T-91%);51(G-100%);59(G-100%);73(T-100%);74(C-100%);75(A-100%);77(C-26%,T-99%);82(C-100%);83(A-18%,G-100%);86(C-99%,T-33%);93(G-100%);94(C-100%);97(T-100%);99(G-16%,A-100%);102(T-99%);105(G-100%);110(A-100%,T-7%);138(G-59%,A-96%);140(A-100%,T-9%);149(G-100%,C-22%);161(G-100%);164(G-100%);188(C-100%);191(A-56%,C-96%);194(C-100%);200(C-99%,T-29%);201(T-100%); | A;T;A/T;G;G;T;C;A;T;C;G;C/T;G;C;T;A;T;G;A;A/G;A;G;G;G;C;C/A;C;C;T | A;T;A;G;G;T;C;A;T;C;G;C/T;G;C;T;A;T;G;A;G;A;G;G;G;C;A;C;T/C;T |
| 339 | AAACTTTTCTTTGTGGCAAGCAATC | TTCCTCTATTCTCATGTCTCCCCAA | 37(G-20%,C-100%);39(A-20%,G-100%);48(C-20%,T-100%);51(C-20%,A-100%);52(G-20%,T-100%);57(A-6%,G-100%);58(A-100%);66(G-100%);69(A-100%,T-20%);72(C-100%);80(A-100%,T-16%);81(G-100%);89(A-96%,G-71%);94(G-100%,T-5%);109(C-100%,T-20%);113(A-20%,C-14%,t-100%);137(G-100%,A-16%);139(G-100%);148(G-100%);155(T-100%);157(G-100%);163(C-100%);164(C-100%);173(A-20%,T-100%);180(G-100%,T-20%);185(C-100%);188(A-100%);192(A-100%,T-10%);222(g-100%);224(G-100%,A-31%);227(A-100%);238(C-100%); | C;G;T;A;T;G;A;G;A;C;A;G;A;G;C;T;G;G;G;T;G;C;C;T;G;C;A;A;G;G;A;C | C/G;A/G;T/C;C/A;T/G;G;A;G;T/A;C;A;G;A/G;T/G;C/T;T/A;G;G;G;T;G;C;C;A/T;T/G;C;A;A;G;G/A;A;C |
| 340 | TGTAGACATAGCTTCCAGGAAATGA | CAATTTTCCTCTTCCTGGTTGCAA | 37(G-100%);55(T-100%);82(G-100%);103(A-100%);106(T-100%);118(C-100%);127(A-100%);181(C-100%);191(A-9%,T-100%);199(G-75%,A-94%);205(C-7%,T-100%);217(A-100%);229(G-100%); | G;T;G;A;T;C;A;C;A/T;A/G;C/T;A;G | G;A/T;G;A;T;C;A;C;T;A;T/C;A;G |
| 341 | TGGAGATCCCATATACCCTCATTCT | AGGCTCTATAAGAGTGATTTGAAGACA | 49(G-100%);50(G-100%,T-12%);63(G-100%,T-12%);69(A-100%);91(C-22%,G-100%);97(A-26%,C-99%);111(A-6%,G-100%);127(A-97%,G-34%);146(A-37%,T-100%);178(C-99%);179(C-12%,G-99%,A-10%);183(C-100%); | G;G;G;G/A;G;C;G;A/G;T/A;C;A/G;C | G;G;G;A;G;A;G;A;T;T;G;C |
| 342 | CCATACCCATCCGACAGCTTATG | AAGTGACATGATAGAAACCACTCCA | 35(T-100%);44(A-11%,T-100%);48(G-12%,T-100%);49(T-100%);61(G-100%);71(G-100%);76(T-100%);85(G-10%,T-100%);91(C-100%);95(C-87%,T-83%);98(T-100%);110(A-9%,G-100%);119(T-100%);124(T-100%);126(G-6%,C-100%);151(A-100%,G-14%);156(A-100%);157(C-100%);161(C-100%,T-30%);186(G-100%,T-11%);188(A-100%);189(G-12%,C-100%);202(A-12%,g-100%);209(a-100%);221(g-100%);223(A-100%,G-6%);235(C-100%);237(G-100%,T-11%); | T;T;T;T;G;G;T;T;C;T/C;T;G;T;T;C;A/G;A;C;C;G;G/A;C;G;A;G;G/A;C;G | T;T;T;T;G;G;T;T;C;C;T;G;T;T;C;A/G;A;C;C;G;A;C;G;A;G;A;C;G |
| 343 | AGGAGCAATTAGGTTCCAATTTCAT | CCTAATTGTATTCCTCTTCCTCCGT | 45(C-100%);47(A-87%,T-83%);57(A-100%);59(T-100%);66(C-100%,T-6%);71(a-100%);83(t-100%);126(G-24%,a-100%);138(C-16%,T-100%);144(A-100%);145(C-99%,T-11%);146(C-100%,T-24%);148(G-24%,A-100%);153(A-100%);154(C-99%,G-12%);183(A-100%);185(T-100%);190(G-13%,A-100%);201(C-100%);204(C-21%,A-99%);214(G-100%);224(G-100%);229(C-99%,T-11%); | C;T/A;A;T;C;A;T;A;T;A;C/T;C;A;A;G/C;A;T;A;C;A;G;G;C/T | C;A/T;A;T;C;A;T;A;T;A;C/T;C;A;A;C/G;A;T;A;C;A;G;G;C/T |
| 344 | CTGTCGAAGCTGAAGAAAGAGAATC | GCGAAGGAGATTAACATGGAGAAC | 45(C-92%,t-24%);55(G-22%,t-92%);60(A-22%,G-92%);61(G-92%,T-22%);68(A-6%,G-100%);74(G-100%);91(T-100%);93(A-100%);99(C-16%,G-96%);104(C-16%,G-96%);106(C-100%);110(C-100%);125(A-40%,C-84%);128(A-23%,C-86%,T-24%);134(G-10%,A-96%);142(C-10%,G-98%);152(A-100%);154(G-92%,C-24%);160(C-22%,T-92%);165(G-24%,T-92%);175(C-99%);178(C-100%);191(C-86%,G-13%,A-22%);192(C-100%);198(T-100%); | T;T;G;G;G;G;T;A;G;G;C;C;C;T;A;G;A;C;T;G;C;C;C;G;T | C;T;G;G;G;G;T;A;G;G;C;C;C;C;A;G;A;G;T;T;C;C;C;C;T |
| 345 | CAGGATTGGTTGTTGAGAAATCCAA | CCCGCACTATTGGAGCTACATAATA | 36(G-100%);44(A-17%,G-100%);54(G-91%,T-75%);70(A-100%);111(G-100%,T-10%);126(G-100%);187(G-10%,A-100%);200(T-100%); | G;G;T;A;G;G;A;T | G;G;T/G;A/C;T/G;G;G/A;T |
| 346 | TCTCATGCATAGACAAGGTAGCATA | GAATCCTAATGCATAAGATAGAAATGGA | 41(a-100%);47(C-82%,g-93%);67(c-100%);68(A-100%,g-16%);69(T-100%);70(G-100%);71(A-100%);75(C-100%);79(G-100%);88(A-100%);95(A-100%);101(T-100%);106(C-100%);107(T-100%);149(T-100%);151(G-33%,A-100%);156(T-100%);161(A-100%);170(G-100%);171(T-100%);173(T-100%);181(C-100%,T-29%);182(T-100%);209(C-16%,T-100%);211(G-100%);214(A-100%);216(C-100%);226(C-100%);228(G-10%,A-100%);236(A-100%); | A;G/C;C;G/A;T;G;A;C;G;A;A;T;C;T;T;A;T;A;G;T;T;C/T;T;C/T;G;A;C;C;A;A | A;C/G;C;A/G;T;G;A;C;G;A;A;T;C;T;T;A;T;A;G;T;T;T/C;T;T/C;G;A;C;C;A;A |
| 347 | TGAATTTTGTATAATTGCAGCACTGA | TTAAACATATGACACCAATGTGCCA | 37(T-100%);39(C-100%);54(T-100%);67(G-100%,A-21%);79(G-100%);93(G-100%,T-11%);97(G-100%);99(A-100%);102(A-40%,C-98%,T-8%);115(C-10%,A-100%);145(A-11%,T-100%);150(C-100%,T-21%);163(A-100%);195(G-100%,T-10%);207(A-100%);212(C-100%);228(C-100%,T-6%); | T;C;T;A/G;G;G;G;A;C;A;T;C/T;C/A;G;A;C;C | T;C;T;G;G;T/G;G;A;C;A;T;C;A;G;A;C;C |
| 348 | CAGACAACTCGAGCAACCTAGT | ACTACGTTCTTATTAAAATGAAGGTCA | 33(A-9%,G-100%);37(T-100%);54(T-100%);62(G-99%,A-22%);67(G-100%);83(G-99%,A-22%);89(G-100%);90(A-100%);94(C-100%);98(A-8%,G-19%,T-99%);104(G-100%);134(G-100%);140(A-11%,C-100%);152(T-100%);161(G-13%,A-100%);170(C-22%,T-99%);185(C-100%);188(C-100%,T-11%);203(A-99%,G-24%);219(G-99%,A-24%);224(G-11%,C-99%);230(C-100%);233(C-100%,T-35%); | G;T;T;G/A;G;G/A;G;A;C;T/G;G;G;C/A;T;A;C/T;C;C;A/G;A/G;C;C;C | G;T;T;A;G;A;G;A;C;A;G;G;C;T;A;C;C;C;G;A;G;C;C |
| 349 | AATGAAGCATCCTGTTGCATGC | TTGTTTAAAATAAAAACGGTTGCCAA | 49(a-100%);77(T-100%);78(C-100%,T-10%);79(C-100%);86(C-100%);93(T-100%);108(A-100%);109(G-100%,A-16%);118(T-100%);180(C-59%,G-97%);197(G-100%);198(C-16%,T-100%);202(A-100%);214(G-100%);226(G-100%);228(A-100%); | A;T;C;C;C;T;A;G;T;G/C;G;T;A;G;G;A | A;T/C;C;C/T;C;C/T;A;A/G;T;G/C;A/G;C/T;G/A;G;A/G;A |
| 350 | CCTTGGAGCCCAAAAGAGTTTTAAA | ATGTTATACCTTCAGTTCTTGGCCT | 37(T-100%);64(G-100%);89(A-100%,G-18%);90(C-100%);112(C-100%);117(G-100%);130(G-19%,A-100%);142(C-100%);160(G-7%,A-100%);172(C-100%);180(G-6%,A-100%);184(C-18%,T-100%);193(A-100%);217(C-100%); | T;G;A;C;C;G;A;C;A;C;A;T;A;C | T;G;G/A;C;C;G;A;C;A;C;A;T/C;A;C |
| 351 | ACTCCATACTCTTGTTTGTGACCTT | TCAAAAATTAAACCTCACACACCAA | 36(G-100%);39(G-100%,T-12%);40(G-97%,A-11%);50(G-43%,A-93%);58(T-100%);62(A-12%,G-100%);72(C-100%);74(G-100%);85(C-96%,A-31%);99(G-100%);105(G-100%);114(A-100%);116(A-97%,T-11%);120(C-100%);121(G-11%,T-97%);123(C-98%,T-22%);124(G-100%);139(C-31%,T-96%);140(A-100%);146(C-97%,T-11%);152(G-100%);158(G-100%);160(G-100%);167(A-100%);178(G-96%,A-32%);181(G-97%,A-11%);184(T-100%);190(C-100%);213(A-100%);227(G-100%);231(G-100%,T-8%); | G;G/A;G;A;T;G;C;G;C;G;G;A;T/A;C;T/G;C/T;G;T/C;A;C;G/A;G/A;G/A;A/G;G/A;G;T;C;A;A/G;G | G;G;A/G;G/A;T;G;C;G;A/C;G;G;A;T/A;C;G/T;C;G;T/C;A;T/C;G;G;G;A;A/G;A/G;T;C;A;G;G |
| 352 | TTGCACAGCGACGATCTCTC | TGGTGGTATTTGAACAAAATTCGAGT | 31(A-44%,G-97%);39(A-15%,G-99%);51(T-100%);56(A-13%,G-100%);59(A-29%,G-100%);81(A-14%,G-100%);86(G-21%,T-98%);88(A-11%,G-100%,T-9%);112(T-90%);131(G-100%);142(G-70%,C-94%);185(G-100%);193(G-8%,A-100%);200(C-100%); | A/G;G;T;G;G;G;T;G;T/-;G;C/G;G;A;C | A;G;T;G;G;G;T;G;-;G;C;G;A;C |
| 353 | GTTGTACAAGACTTCAAGGTAAGCC | TTATTCTCTCCAAGAGCCATCTGAG | 66(C-59%,G-92%,A-44%);67(G-100%);74(t-100%);98(A-100%,G-27%);107(T-100%);119(A-5%,C-100%);125(G-59%,A-95%);127(G-100%);130(A-100%);131(C-100%);133(T-100%);137(A-100%);145(T-100%);149(A-91%,G-83%);166(A-100%);188(A-14%,C-100%);190(A-100%,T-28%);193(A-26%,T-100%);199(A-100%,c-28%);220(G-26%,C-100%);222(T-100%); | G/A;G;T;G/A;T;C;A;C/G;A;C;T;A;T;A/G;A;C;A/T;T;C/A;C;T | G/A;G;T;A;T;C;A/-;-/G;A;C;T;A;T;G/A;A;A/C;A;A/T;A;C/G;T |
| 354 | GGTTTTGATTAGGATTTGAGGCTTCA | AGAGCTTGAAGAATCACTTGAGATT | 38(A-100%);39(T-100%);43(C-8%,T-100%);48(A-100%,T-8%);50(C-100%);56(T-100%);62(C-100%,T-5%);71(A-7%,G-100%);72(T-100%);94(G-100%,T-15%);98(G-7%,C-100%);101(T-100%);116(G-100%);121(A-100%);131(C-100%);134(G-8%,C-100%);136(G-100%);141(T-100%);142(T-100%);150(A-8%,G-100%);152(A-99%,T-21%);157(G-8%,T-100%);159(T-100%);167(G-59%,T-96%);169(T-100%);173(C-7%,T-100%);200(T-100%);213(A-87%,G-10%,C-72%,T-7%);218(G-100%);230(G-100%); | A;T;T;A;C;T;C;G;T;G;C;T;G/A;A;C;C;G;T;T;G;A;T;T;T;T;T;T;C/A;G;G | T/A;T;T/C;A/T;C;T;T/C;G;T/C;T/G;C/G;T;G;A;T/C;G/C;G;T;T;A/G;T/A;G/T;T;T;C/T;T/C;T;C/T;T/G;G |
| 355 | AATCCTCAAGCACTCTTTTCAACTC | AGCAAAGATACAAGCTGATGCAATG | 47(A-99%,T-26%);83(G-100%,T-13%);94(G-100%);98(A-10%,G-100%);107(C-100%);110(A-100%);113(G-97%,T-37%);155(A-14%,G-100%);158(T-100%);164(T-100%);185(C-5%,G-100%);197(C-100%);212(G-100%);215(C-26%,T-99%);229(G-100%);230(C-100%,T-13%);239(A-100%); | A;G;G;G;C;A;G;G;T;T;G;C;G;T;G;C;A | A/T;G;G;G;C;A;T/G;G;T;T;G;C;G;C/T;G;C;A |
| 356 | TCTATCATATTCTTTATTCAGGATAGGGA | CAGTCTTCATATTAGTCATGGCTTCA | 53(A-100%);60(G-100%);62(A-100%);82(C-25%,A-100%);91(G-5%,A-91%);98(C-75%,T-64%);109(C-91%);122(A-100%);129(T-100%);134(T-100%);148(G-100%);174(C-100%);183(C-100%);186(T-100%);204(G-100%);210(C-100%);213(C-100%,T-10%);225(C-98%,T-47%); | A;G;A;A;A;C/T;C;A;T;T;G;C;C;T;G;C;C;T/C | A;G;A;A;A;T/C;C;A;T;T;G;C;C;T;G;C;C;T/C |
| 357 | TGTCTGTAATCTTTCTGATAAGCAAGA | CTGGATCTTCTACTCCAAAGAAGCT | 61(A-9%,C-100%);71(C-100%);86(T-100%);91(C-98%,T-38%);102(C-100%);119(A-10%,t-99%);123(G-10%,t-99%);157(A-8%,C-100%);159(A-98%,G-31%);185(A-100%);191(T-100%); | C;C;T;C;C;T;T;C;A;A;T | C;C;T;C;C;T;T;C;A;A;T |
| 358 | TGAGATGATGAAGAACGGCAATAGA | GCTACTAGATTCGCTAAATGGCCTA | 40(C-100%,T-9%);50(A-11%,T-100%);61(G-100%);62(G-100%,A-35%);76(C-100%);84(A-100%);95(A-100%);110(A-100%);113(G-100%);118(G-100%);122(T-100%);152(G-100%);167(A-21%,C-100%);170(G-100%);176(A-11%,G-100%);185(G-6%,A-100%);203(G-100%);205(C-100%); | C;T;G;G/A;C;A;A;A;G;G;T;G;C;G;G;A;G;C | T/C;T;G;A/G;C;A;A;A;G;G;T;G;A/C;G;G;A;G;C |
| 359 | CCAACAGGCTATACAAAATCCGATC | TTGAGTGGAGACCTTGGTTAATTGT | 38(G-99%);44(A-11%,G-100%);48(A-100%);50(C-100%);76(G-100%);77(G-100%);82(C-100%);92(A-16%,C-99%);95(G-97%,A-22%);98(G-100%);127(A-23%,G-97%);135(G-17%,A-96%);152(G-93%,T-38%);153(C-11%,T-100%);157(G-100%);159(G-97%,T-26%);160(C-17%,T-96%);168(A-97%,G-22%);177(C-74%,T-72%);187(A-6%,T-100%); | G;G;A;C;G;G;C;C;G;G;G;A;G;T;G;G;T;A;C;T | G;G;A;C;G;G;C;C;G/A;G;G;A;T/G;T;G;G;T;G/A;T/C;T |
| 360 | TGAAGTTTGAGCTTCTATCTGTTGT | TTAATTCCCTCCATCTGACTGCTC | 38(t-100%);48(c-100%);50(G-13%,t-99%);52(t-100%);53(G-12%,a-99%);56(c-100%);88(G-100%);106(C-100%);118(C-5%,G-100%);122(A-36%,G-94%);126(A-100%);132(A-100%);134(C-100%);139(C-100%);186(C-98%,T-24%);189(A-100%);190(C-100%);191(A-100%,G-21%);193(G-100%,C-21%);196(A-100%);199(C-98%,T-33%);202(A-100%);209(G-100%);216(C-100%);217(G-65%,A-85%); | T;C;T;T;A;C;C/G;C;G;A/G;A;A;C;C;C;A;C;A/G;G/C;A;C;A;G;C;A | T;C;T;T;A;C;G;C;G;G/A;A;A;C;C;C;A;C;A;G;A;C;A;G;C;A/G |
| 361 | GAGGCCTTCTTAGTTATTTTCTCGC | AGGCCAAATCAAATTAGGATTGGAA | 38(C-97%,G-13%);46(C-98%,T-11%);50(A-31%,G-96%);51(C-97%,T-13%);56(A-97%,G-13%);60(C-97%,T-13%);61(C-100%,T-7%);62(C-100%,T-6%);64(A-31%,G-96%);67(C-97%,T-13%);74(C-17%,T-100%);75(G-100%);86(A-93%,G-43%);95(A-97%,G-13%);105(C-97%,T-13%);113(G-99%);147(A-14%,G-99%);155(C-98%,T-20%);174(G-9%,C-43%,T-91%);186(t-100%);199(a-100%);204(T-99%);208(C-13%,T-97%); | C;C;G;C/T;A/G;T/C;T/C;C;G;T/C;T;G;A/G;G/A;C/T;G;G/A;C;C/T;T;A;T;T/C | G/C;T/C;G;T/C;G/A;T/C;C;C;G;T/C;T;G;A/G;A/G;C/T;G;G;C;C/T;T;A;T;T/C |
| 362 | ATCGATTTTTGTGTAGAAAGACCGG | TTTCGTTGAGTTCTTTTCATTCAAAA | 49(A-100%);59(G-100%,A-5%);70(C-100%);82(G-100%);90(G-100%);98(C-100%,T-5%);115(T-100%);119(C-100%);128(G-100%);138(a-100%);158(C-91%,G-47%,A-20%);161(A-10%,G-100%);168(A-100%,T-10%);169(C-10%,T-100%);175(G-100%);182(A-10%,G-100%);186(T-100%);188(G-100%);189(A-100%);192(G-100%);203(C-100%);206(C-100%);211(C-100%); | A;G;C;G;G;C;T;G/C;G;A;A/G;G;A/T;T/C;G;G;T;G;A;G;T/C;C;C | A;G;C;G;G;C;T;C;G;A;C;G;A;T;G;G;T;G;A;G;C;C;C |
| 363 | CCTTGGCTTTGCAGTAGATATTTCC | ATTCGCAACTCATAGCCAATCAAAT | 39(C-6%,T-100%);43(A-100%,T-6%);46(A-99%,T-22%);50(G-100%);53(G-100%);59(G-100%);66(A-99%,G-16%);69(G-100%,A-29%);71(C-100%);78(C-100%);96(A-15%,G-100%);101(G-100%);115(G-100%);119(A-12%,C-99%);133(G-99%,C-27%);140(G-100%);158(C-100%);159(G-12%,C-99%);189(C-14%,T-100%);194(A-9%,G-100%); | T;T/A;A;G;G;G;G/A;A/G;C;C;G;G;G;C/A;C/G;G;C;G/C;T;G | T;A;A;G;G;G;A;G;C;C;G;G;G;C;G;G;C;C;T;G |
| 364 | TAGCTCATTATAGAAGCCCTTCCTC | AGAAGCATCAGGTTATGAATTCTGA | 71(G-100%);73(C-12%,T-100%);91(C-100%);97(G-100%,T-6%);98(C-100%);130(G-12%,A-94%);139(A-100%);144(G-100%);147(G-100%);158(T-100%);169(T-100%);171(G-6%,C-100%);175(C-13%,A-100%);179(T-100%);184(C-100%);204(C-100%,T-12%);205(G-100%);218(T-100%);226(A-10%,C-91%);227(A-91%,T-10%); | G;T;C;G;C;A;A;G;G;T;T;C;A;T;C;C;G;T;C;A | G;T;C;G;C;A;A;G;G;T;T;C;A;T;C;C;G;T;A;T |
| 365 | ACCACATTGATGGTAGCAAAATTGT | GTCCAACATGCCTTAAATTTTGTCC | 38(A-25%,G-94%);39(A-9%,G-99%);42(G-15%,C-98%);48(C-98%,T-15%);51(G-100%);52(A-47%,C-27%,T-77%);57(G-15%,A-98%);58(C-9%,T-99%);61(A-11%,T-98%);74(C-98%,T-15%);75(G-9%,A-99%);78(C-99%);79(T-99%);82(A-9%,T-99%);84(G-76%,T-66%);94(A-9%,C-98%,T-7%);95(G-44%,T-89%);96(G-76%,A-66%);101(A-15%,C-98%);102(A-11%,T-99%);107(A-11%,G-98%);114(C-87%,T-42%);115(T-100%);116(G-100%);118(A-9%,G-99%);122(G-100%,T-5%);124(A-99%);125(C-100%);129(A-15%,G-98%);134(A-15%,G-98%);138(G-11%,A-99%);144(C-99%);148(A-27%,T-94%);149(G-66%,T-75%);153(C-100%);158(A-44%,C-15%,G-84%);160(C-15%,T-98%);161(A-10%,G-99%);163(C-98%,T-15%);167(T-99%);173(C-100%);174(C-25%,T-93%);180(C-99%);181(C-68%,T-72%);183(A-68%,G-72%);197(C-95%,T-24%);198(G-98%,T-15%);200(G-68%,A-66%,T-15%);202(T-99%);203(C-66%,T-76%);204(G-95%,A-25%);205(A-9%,G-99%);209(A-15%,G-98%);213(T-100%);216(C-100%);225(G-10%,A-99%);229(C-100%);231(G-99%);233(A-22%,C-95%);234(A-15%,G-98%);235(A-15%,G-98%);236(A-11%,G-99%);237(C-9%,T-99%); | A/G;G;C;C;G;A/C;A;T;T;C;A;C;T;T;T;C;G/T;A;C;T;G;C;T;G;G;G;A;C;G;G;A;C;T;G;C;A/G;T;G;C;T;C;T/C;C;T;G;C;G;A;T;C;A/G;G;G;T;C;A;C;G;C/A;G;G;G;T | G;G;C/G;T/C;G;T/C;A/G;T;A/T;T/C;A;C;T;T;T/G;C;T;G/A;C/A;T/A;A/G;T/C;T;G;G;G;A;C;G/A;G/A;G/A;C;A/T;G/T;C;G/C;C/T;G;C/T;T;C;T;C;T/C;A/G;T/C;T/G;G/A/T;T;C/T;G/A;G;A/G;T;C;G/A;C;G;C;A/G;G/A;G/A;T |
| 366 | AGAGATTTGTTATGAACGAGAAATTACA | CTGGTAGGTGGACAGCTTTATAAGG | 52(A-100%,T-35%);54(G-100%,A-55%);56(G-20%,A-100%);60(A-99%,G-71%);68(T-100%);73(T-100%);75(A-100%);88(A-100%,T-13%);91(A-54%,T-100%);116(A-26%,G-100%);119(A-21%,T-100%);127(A-100%);128(G-11%,A-100%);134(G-100%,T-60%);143(A-100%);155(C-6%,A-100%);179(T-100%); | A;G;A;A;T;T;A;A;T;G;T;A;A;G/T;A;A;T | T/A;A/G;-/A/G;G;T;C/T;A;A;A/T;G;A/T;A;A;G/T;A;A;T |
| 367 | TCAAAGTTTAGGTGTTACATATGTAAAAACA | GAGGCTTTTGGATACCGGCAC | 68(C-99%);80(G-10%,A-98%);85(C-99%);97(C-37%,T-97%);101(A-27%,C-100%);102(A-11%,T-100%);136(A-100%);139(C-100%);142(C-22%,T-98%);148(G-11%,A-100%);165(A-100%);179(T-100%);187(C-100%);188(C-99%,T-26%);201(T-100%);203(C-100%,T-11%);208(G-8%,C-100%);212(T-100%);217(G-100%);218(G-100%);221(T-100%);225(C-7%,G-100%);226(A-100%);227(C-100%); | C;A;C;T/C;C;T;A;C;T;A;A;T;C;C;T;C;C;T;G;G;T;G;A;C | C;G/A;C;T;C;T;A;C;T;A;A;T;C;T/C;T;C;C;T;G;G;T;G;A;C |
| 368 | ATGTTCAATGAGGGTCACTACAGAA | GGGACCACATATCAATTGTTGTTGA | 54(T-100%);56(G-18%,A-100%);58(G-100%,T-20%);62(C-100%,T-18%);63(G-100%);64(G-21%,A-99%);69(C-100%);75(G-99%);94(A-98%,G-34%);100(T-99%);104(C-92%,G-75%);109(C-100%);112(C-100%);131(A-99%);135(C-100%);151(C-100%);160(C-100%);168(C-100%);178(A-98%,T-34%);179(A-26%,G-100%);187(G-100%);191(C-99%);199(C-100%,T-8%);209(G-99%,T-6%); | T;A;G;C;G;A/G;C;G;A/G;T;G;A/C;C/A;A;C;C;C;C/T;T/A;G/A;G;C;C;G | T;A;G;C;G;A/G;C;G;G/A;T;G/C;C;C;A;C;C;C;C;T/A;G;G;C;C;G |
| 369 | GGAATCAGAAAAATCAACAGCGAAC | CCATGAAACATTCAATGCTTCTAAC | 37(A-23%,T-100%);53(C-22%,T-100%);56(C-22%,T-100%);66(A-100%);71(A-100%,T-6%);77(A-100%);107(T-100%);118(T-100%);119(G-24%,A-100%);127(C-100%,T-32%);128(G-100%);138(C-100%);146(A-13%,G-100%);149(a-100%);155(t-100%);157(c-100%);171(C-100%);179(A-100%);181(G-100%);183(A-15%,G-100%);214(C-6%,T-100%);235(A-23%,G-100%); | T;T;T;A;A;A;T;T;A;C;G;C;G;A;T;C;C;A;G;G;T;G | T/A;T;T;A;A;A;T;T;G/A;C;G;C;G;A;T;C;C;A;G;G;T;G/A |
| 370 | CTCCCCTCAGATGTTGTTATCACTA | TGAAGTTGATGATAGGTCAGTTCAT | 45(C-100%);50(T-100%);54(A-100%,T-14%);64(G-12%,C-100%);65(G-95%,A-83%);73(C-6%,A-100%);75(A-100%,T-50%);76(G-100%);80(a-100%,T-24%);82(C-5%,g-100%);85(t-100%);105(A-27%,g-100%);107(G-24%,a-100%);115(C-100%);136(C-14%,T-100%);139(T-100%);147(G-100%);156(A-93%,T-89%);184(G-27%,C-100%);186(G-27%,C-100%);198(G-63%,T-97%);212(G-100%,T-8%);215(C-100%);216(A-24%,T-100%);222(G-63%,C-97%); | C;T/C;A;C/G;G/A;A;A;G;A;G;T;G;A;C;T;T;G;T/A;C;C;G/T;G;C;T;C/G | C;T;A;C;G/A;A;A;G;A/T;G;T;A/G;A/G;C;T/C;T;G;A;G/C;G/C;T;G;C;T/A;C |
| 371 | GCCGTGTGTATGTAAAATTCCCAAA | TTCCATACTTCATATCCAGTCTCCT | 62(G-100%);68(A-100%);89(A-100%);90(G-100%);98(A-100%);134(G-100%);146(A-98%,T-27%);148(C-100%);150(A-27%,T-98%);151(C-27%,T-98%);154(C-27%,T-98%);158(T-100%);162(C-100%);163(G-100%);164(A-100%);193(A-100%);199(A-100%);200(A-100%);202(C-28%,T-97%);205(T-100%); | G;A;A;G;A;G;A;C;T;T;T;T;C;G;A;A;A;A;T;T | G;A;A;G;A;G;T/A;C;T/A;C/T;T/C;T;C;G;A;A;A;A;C/T;T |
| 372 | TGAAAACAGATAGGAATCGAGTGGT | AAGCGTGGTACAAAAAGGGTCAAA | 54(G-99%,T-33%);64(T-92%);66(C-92%,T-7%);79(G-17%,T-86%);82(T-100%);83(C-100%);94(C-100%);117(C-18%,T-97%);124(T-100%);131(G-100%);133(A-97%,C-54%);148(C-97%,T-17%);162(C-100%);173(C-7%,A-100%);177(G-100%);184(T-100%);193(G-97%,A-54%);194(C-100%);207(G-91%,T-83%);218(T-100%);219(G-100%);223(A-100%);226(G-100%);230(A-100%);231(T-100%);232(A-100%,T-14%); | G;T;C;G;T;C;C;C;T;G;C;T;C;A;G;T;A;C;T;T;G;A;G;A;T;A | G;-;-;-;T;C;C;T;T;G;A;C;C;A;G;T;G;C;G;T;G;A;G;A;T;A |
| 373 | TTATCTGAGGGTATGTTGGGCTTAC | GTAACATCTTCCAGGGTGAGAAGAT | 42(C-100%);43(A-13%,T-99%);57(A-100%);60(G-64%,T-77%);61(C-100%);62(T-100%);63(A-100%);65(C-6%,G-99%);72(A-24%,C-93%,T-5%);77(A-100%);78(C-100%);79(G-98%);80(G-77%,C-59%,T-11%);81(G-99%);82(C-100%);83(C-97%,T-24%);84(A-100%);89(A-5%,G-100%);90(T-100%);91(C-91%,T-32%);93(A-77%,G-64%);97(C-100%);99(G-99%,T-13%);102(A-99%);107(T-100%);109(T-100%);115(A-20%,C-95%);120(C-100%);122(T-100%);127(G-100%);128(C-100%);144(T-100%);147(C-11%,A-98%);149(G-100%);150(A-13%,G-99%);151(C-44%,T-89%);155(C-11%,T-98%);157(A-13%,G-99%);159(C-100%);165(C-100%);168(C-68%,T-74%);169(A-13%,G-99%);173(C-99%,T-13%);176(C-34%,T-91%);177(A-100%);178(A-75%,G-67%);179(G-7%,A-100%);183(A-100%);184(C-99%,T-13%);186(A-100%);187(G-88%,A-43%);191(C-100%);196(C-100%);200(A-100%);201(C-100%);203(A-11%,T-98%);205(C-100%);206(C-100%);210(A-13%,G-35%,T-89%);211(G-100%);212(A-7%,G-99%);213(C-100%);215(G-100%);218(C-11%,A-98%);220(A-100%);223(G-100%);224(C-91%,T-35%);226(A-7%,G-99%);227(A-100%);229(G-98%,T-11%);230(A-11%,G-98%);231(A-24%,C-94%);232(A-100%);234(T-100%); | ND | C;T;A;T;C;T;A;G;C;A;C;G;G;G;C;C;A;G;T;C;A;C;G;A;T;T;C;C;T;G;C;T;A;G;G;T;T;G;C;C;T;G;C;T;A;A;A;A;C;A;G;C;C;A;C;T;C;C;T;G;G;C;G;A;A;G;C;G;A;G;G;C;A;T |
| 374 | CTCTTCGTTCTCCTCTTCCAATACA | ACCATCAAAGTACAGTAATCTTAATTCA | 36(A-20%,C-100%);41(T-100%);43(G-22%,T-100%);48(C-100%);49(g-100%);56(c-100%);60(t-100%);70(G-100%);71(G-100%);73(G-100%);83(C-100%);106(T-100%);109(A-100%);114(A-100%);115(G-100%);132(T-100%);133(G-23%,T-100%);161(C-22%,T-100%);165(G-100%);168(A-100%,G-22%);171(C-6%,T-100%); | C;T;T/G;C;G;C;T;A/G;G;G;C;T;A;A;G;T;T;C/T;G;A/G;T | C;T;G/T;C;G;C;T;G;G;G;C;T;A;A;G;T;T;T/C;G;G/A;T |
| 375 | TCAATACATACCCTGAGAAAGAAATAGC | CGCTTAATGATTCTACTAGTGGACC | 49(T-99%);64(G-81%,C-36%);81(C-13%,A-100%);86(C-100%);89(A-81%,T-36%);95(A-81%,G-36%);96(G-100%);116(A-100%);125(A-100%);143(T-97%);167(G-100%);169(G-100%);181(G-37%,C-100%); | T;C;A;C;T;G;G;A;A;T;G;G;C | T;C/G;A/C;C;A/T;G/A;G;A;A;T;G;G;G/C |
| 376 | GCGCCATCCTAGCCGATA | AGTGTAACACATCAATAGCTCCACT | 29(A-100%);47(G-100%,A-38%);50(C-100%);53(C-100%);63(T-100%);65(T-100%);74(G-100%);103(C-100%);106(C-100%);113(C-100%,T-18%);122(C-100%);152(G-100%);167(G-59%,C-97%);176(G-100%);201(g-100%,T-11%);208(C-100%,g-31%);210(g-100%);212(a-100%);219(G-100%,T-11%); | A;A/G;C;C;T;T;G;C;C;T/C;C;G;C;G;G;G/C;G;A;G | G/A;G/A;T/C;C;T;T;G;C;C;C;T/C;G/A;C;G;G;G/C;C/G;A;G |
| 377 | TTTGCAATAAGAGGGCATTTTGGAT | TTCATTATTGTTTCTAGGTGCACGG | 51(c-100%);53(T-100%);65(C-23%,T-100%);77(G-50%,C-23%,T-98%);90(G-100%);93(T-100%);94(A-100%);104(C-100%);107(G-100%);118(C-7%,A-100%);120(C-100%);121(G-100%,A-23%);128(A-9%,T-100%);153(T-100%);164(G-100%);191(G-100%); | C;T/C;T;T;G;C/T;T/A;C;G;A;C;G;T;T;G;G | C;T;T;T;G;T;A;C;G;A;C;G;T;T;G;G |
| 378 | ACACCATAATTCCAAACATTTACGC | GTAGACCTTTACTTCAATCTTGCGG | 36(A-24%,T-98%);38(C-98%,T-24%);39(T-23%);41(A-100%);42(C-100%);45(G-21%,C-100%);47(G-100%);49(A-14%,C-100%);51(A-20%,C-99%);54(C-99%,T-26%);63(A-100%);67(A-96%,T-43%);68(G-98%,T-23%);71(G-23%,C-99%);78(T-100%);92(A-100%);108(C-96%,T-50%);119(G-96%,T-57%);141(A-99%);143(G-24%,A-99%);145(A-100%);151(A-13%,C-99%);196(t-100%);197(a-100%);223(G-100%);226(A-98%,T-49%); | T;C;-;A;C;C;G;C;C;C;A;A/T;T/G;C;T;A;C/T;G/T;A;A;A;C;T;A;G;T/A | T;C;-;A;C;C;G;C;C;C;A;A;G;C;T;A;C;G;A;A;A;C;T;A;G;A |
| 379 | GAAATAGTGGTAGATCGTTGAAGCG | ACGACCATGAATTCACGAGCATAAT | 36(a-99%);37(c-100%);40(c-100%);45(t-100%);47(g-100%);56(c-100%,T-14%);58(G-57%,a-17%,T-93%);59(a-100%);60(a-100%);61(t-100%);62(c-100%);63(t-100%);65(G-15%,c-100%);66(t-100%);71(C-100%);76(G-99%,A-17%,T-28%);80(C-100%);81(C-15%,A-100%);86(C-100%,T-15%);87(C-98%,A-46%);88(C-99%,T-32%);90(A-98%,G-45%);96(A-32%,G-99%);97(G-8%,A-100%);114(T-100%);117(A-94%,G-65%);119(C-98%,T-18%);120(A-75%,G-72%);124(C-100%);125(G-98%,T-32%);126(A-100%);127(A-96%,G-46%);131(A-100%);132(A-22%,C-100%,t-17%);133(c-100%,T-14%);134(t-100%);142(g-99%,T-32%);145(c-99%,T-33%);147(g-100%);151(A-100%,g-17%);154(G-100%);155(C-100%);156(T-100%);157(G-100%);160(G-100%);163(C-100%,T-17%);170(A-8%,G-100%);171(A-100%);173(G-100%);176(T-100%);178(C-28%,G-99%);179(T-100%);181(C-100%);184(G-100%,T-17%);185(c-100%,T-13%);190(c-100%,T-9%);200(t-100%);203(g-100%);211(g-100%);212(g-100%);217(g-100%);219(c-100%);221(A-32%,C-99%); | A;C;C;T;G;C;T/A;A;A;T;C;T;C;T;C;G/A;C;C/A;C/T;A/C;C;A/G;G;G/A;T;G/A;C/T;A/G;C;G;A;G/A;A;T/C;C;T;G;C;G;A/G;G;C;T;G;G;C/T;G;A;G;T;G;T;C;G/T;C;C;T;G;G;G;G;C;C | A;C;C;T;G;C;T/G;A;A;T;C;T/G;G/C;T;C;G;G/C;A;C;A/C;T/C;G/A;G/A;A;T;A/G;A/C;A/G;C;T/G/A;A/T;G/A;G/A;C;C;T/C;T/G;C/T;A/G;A;G;C;T;A/G;A/G;C;G;G/A;G;A/T;G;T;C;G;C;C;T/C;A/G;T/G;C/G;A/G;G/C;C/A |
| 380 | AAGAGAATCTGATGGCTCTACAACC | TGACCACGTATAAGAAAGGTAATTGA | 44(C-100%);52(G-8%,A-100%);73(A-10%,T-100%);82(C-100%);99(T-100%);101(T-100%);115(C-68%,T-92%);121(C-100%);141(C-10%,A-100%);149(G-100%);160(C-100%);161(G-10%,A-100%);180(A-100%);187(g-100%);207(t-100%);211(A-100%);212(C-10%,A-89%,T-69%);220(A-94%,T-64%);222(G-100%,T-6%);233(A-100%); | C;A;T;C;T;T/C;T;C;A;G;C;A;A;G;T;A;A;A;G;A | C;A;T/A;C;T;T;C/T;C;C/A;G;C;G/A;A;G;T;A;C/T;A/T;G;A |
| 381 | AACTTACGTTTCATAAGCACTTGGC | TGTGACTTATAAACCTTTTCTGATGC | 40(C-5%,T-100%);43(G-23%,T-100%);48(C-13%,T-100%);50(C-100%);56(C-13%,G-100%);68(G-100%);76(T-100%);139(A-100%);163(G-17%,A-100%);164(C-100%);166(A-100%); | T;T;C/T;C;G;G;T;A;A;C;A | T/C;T;C/T;C;C/G;G;T;A;G/A;C;A |
| 382 | ACCGCTGTTGTTATGAGTGATTTTT | CCGCCCAACCTTAGATATACAATCA | 42(a-76%,T-63%);46(C-23%,a-94%);53(C-7%,T-98%);56(A-73%,G-57%);66(G-100%,T-7%);73(C-100%,T-7%);74(C-100%,T-7%);80(C-100%);82(A-63%,G-76%);90(C-11%,t-97%);101(G-6%,a-98%);132(G-7%,A-100%);138(T-99%);141(A-18%,G-97%);147(A-63%,G-76%);173(G-7%,A-100%);200(C-100%);201(C-92%,T-27%); | A;A;T;G;G;C;C;C;G;T;G;A;T;G;G;A;C;C | A;C;T;G;G;C;C;C;G;T;A;A;T;G;G;A;C;C |
| 383 | TTTTCCACTACAAGGAGACACTCTT | AGTGATAAGGAAGACATGCCTCTAA | 39(A-8%,G-99%);40(C-100%,T-8%);42(G-100%);43(C-100%);47(T-100%);48(C-99%,T-5%);52(C-97%,T-7%);63(G-100%);66(C-95%,T-33%);70(T-100%);78(C-89%,T-47%);79(G-100%);85(C-100%);90(C-100%);104(C-100%);105(A-100%);107(C-5%,T-99%);108(C-100%);110(A-100%);111(T-100%);115(g-96%,T-30%);120(t-100%);123(c-100%);126(g-100%);129(t-100%);130(a-100%);132(c-100%);136(G-19%,A-96%);138(C-100%);139(G-97%,A-18%);141(A-100%);144(C-100%);160(G-100%,T-7%);169(G-100%,A-7%);172(C-100%);174(T-100%);184(A-96%,T-30%);188(A-100%,G-7%);189(T-100%);193(C-100%);196(C-96%,T-30%);198(C-5%,T-100%);204(C-10%,T-100%); | G;C;G;C;T;C;C;G;C;T;C;G;C;C;C;A;T;C;A;T;G;T;C;G;T;A;C;A;C;G;A;C;G;G;C;T;A;A;T;C;C;T;T | G;C;G;C;T;C;C;G;C;T;T;G;C;C;C;A;T;C;A;T;G;T;C;G;T;A;C;G;C;G;A;C;G;G;C;T;A;A;T;C;C;T;T |
| 384 | GCTAAAGAAGCCTTTTGCGAACAAA | CTGGTAGAGATGGTTGATAGGAACG | 40(t-100%);42(G-6%,a-100%);46(a-100%);49(C-100%);51(C-91%,A-37%);66(G-6%,A-99%);69(C-100%,T-9%);83(G-99%,T-6%);90(A-100%);99(T-100%);105(A-100%);106(C-100%);115(A-6%,G-100%);117(C-100%,T-20%);118(C-100%);135(A-100%);137(C-100%);161(A-99%);171(C-100%);175(A-100%);188(G-6%,A-100%);201(G-100%);208(G-100%); | T;A;A;C;A;A;C;G;A;T;A;C;G;C;C;A;C;A;C;A;A;G;G | T;A;A;C;C;A;C;G;A;T;A;C;G;C;C;A;C;A;C;A;A;G;G |
| 385 | CTTCTTGGTCAGGAGTGATAGAAGA | TTGCTGCCTTCCGCTATATATCATA | 40(C-100%);77(t-100%);85(C-78%,T-92%);95(A-100%);123(G-100%);132(G-100%);136(C-100%);164(C-11%,T-100%);198(A-19%,T-100%);200(C-100%,T-21%);203(T-100%);210(G-98%,C-13%);213(C-19%,T-100%); | C;T;T;A;G;G;C;T;T;T;T;G;T | C;T;C/T;A;G;G;C;T;T/A;T/C;T;C/G;T/C |
| 386 | TTAGCATATTCGAAGGAAGCACATG | AATCACATAACAAAGGGTGTAACAG | 64(C-98%,T-9%);66(A-100%);75(A-100%);84(C-97%,T-9%);90(T-100%);93(C-97%,T-10%);114(A-97%,C-10%);124(C-100%);136(G-93%,A-20%);138(A-10%,T-97%);140(A-99%);145(G-100%);149(G-100%);151(C-99%);172(G-100%);177(G-99%);187(C-97%,T-11%);188(T-100%);193(A-100%);196(C-10%,G-97%);205(C-20%,T-91%);218(C-97%,T-10%);235(C-100%); | C;A;A;C;T;C;A;C;G;T;A;G;G;C;G;G;C;T;A;G;T;C;C | C;A;A;C;T;C;A;C;G;T;A;G;G;C;G;G;C;T;A;G;T;C;C |
| 387 | CTGGGAAATGGGATATTTAACAGGC | ACTGGAGTACTGCAAAATTCTGTTG | 43(A-12%,T-100%);48(G-100%);88(T-100%);94(A-100%);96(C-50%,T-98%);103(T-100%);118(A-9%,G-100%);121(A-12%,T-100%);130(A-100%);177(G-100%);187(A-100%,T-9%); | A/T;G;T;A;T/C;T;G/A;A/T;A;G;A | T;G;T;A;T/C;T;G;T;A;G;A |
| 388 | ACTCCTTGTGATAACCCGATTGG | TCCCTTGTATTTGCTGATAGGAATCT | 60(C-100%);72(C-100%);84(T-100%);91(C-95%,G-44%);93(A-7%,G-100%);117(C-33%,G-97%);120(G-100%);132(C-100%);138(C-16%,A-99%);147(C-100%);151(T-100%);166(C-100%,A-6%);168(G-10%,T-100%);177(G-31%,A-98%);206(A-5%,G-100%);210(C-100%);213(A-100%); | C;C;T;G;G;G;G;C;A;C;T;A;T;A;G;C;A | C;C;T;G/C;G;G/C;G;C;C/A;C;T;C;T;A/G;G;C;A |
| 389 | AATATGTCTGGGTTTCTGATGGGAT | CGAGAGCCACGGCAAGATG | 54(C-5%,T-100%);62(T-100%);78(C-7%,T-100%);79(A-100%);87(C-100%);89(G-100%);97(C-100%);99(C-7%,G-100%);145(A-100%);151(G-100%,T-7%);158(A-100%,T-10%);162(C-100%);163(T-100%);164(G-100%);171(T-100%);177(G-100%,T-13%);192(C-100%);198(C-100%);213(G-100%);231(C-100%); | T;T;T;A;C;G;C;G;A;G;A;C;T;G;T;G;C;C;G;C | T/C;T;C/T;A;A/C;G;C;G/C;A;T/G;A;C;T;G;T;G;C;C;G;C |
| 390 | GTTGGATGCATTAGGTTTACTGTGA | TTCATGTGAGTTATCAAGCCTTTGC | 48(G-16%,A-90%);57(G-88%,T-21%);63(G-100%);77(G-100%);131(C-100%);132(A-99%);144(G-7%,T-96%);161(A-90%,T-16%);165(T-100%);169(G-17%,A-90%);170(C-100%);178(C-100%);183(A-95%,T-10%);192(C-100%);193(A-6%,G-96%);198(C-100%);237(A-100%); | A;G;G;G;C;A;T;A;T;A;C;C;A;C;G;C;A | A/G;T/G;G;G;C;A;T;T/A;T;G/A;C;C;A;C;G;C;A |
| 391 | TTCAAACCAGATGACATCACTTTCA | ATGAATTCTGCAAGCACCAAGAAAA | 52(A-17%,G-100%);60(A-11%,G-99%);85(T-100%);87(G-5%,T-100%);96(A-90%,G-63%);97(C-79%,G-76%);98(C-6%,T-99%);100(A-5%,G-100%);107(A-10%,G-100%,T-14%);151(C-100%);157(A-6%,C-99%);162(T-100%);171(A-6%,G-99%);177(A-100%);183(G-100%);185(A-100%);192(A-99%,T-6%);193(A-99%,G-31%);201(A-48%,T-100%);213(C-100%);215(A-100%);232(C-99%,T-6%); | A/G;G;T;T;G/A;C/G;T;G;G;C;C;T;G;A;G;A;A;G/A;A/T;C;A;C | G;A/G;T/C;T;G;G;T/C;G;G/A;C/T;C/A;T;A/G;A;A/G;A/G;T/A;A/G;T;C;A;T/C |
| 392 | GCTCAGATCAACATAAACAGCACTC | AGGAATTCTTACTCCTGATTTGGGA | 37(A-100%);44(A-100%);45(C-100%,T-8%);52(A-100%);54(C-100%,T-8%);64(A-100%,G-8%);70(A-100%,T-19%);91(C-100%,T-18%);104(T-100%);109(G-100%);138(T-100%);154(C-100%);157(A-100%);158(G-100%);169(A-100%);183(G-19%,A-100%);190(A-100%);197(C-100%);199(A-15%,C-100%);202(G-100%,A-26%);214(G-19%,A-100%); | A;A;C/T;A;T/C;G/A;A;C;T;G;T;C;A;G;A;A;A;C;C;A/G;A | A;A;T/C;A;C;A/G;T/A;C;T;G;T;C;A;G;A;A/G;A;C;C;G/A;G/A |
| 393 | CACAGAGTTCCGCCATGTC | GAAAGGCTTCTTGCTTCACAT | 33(A-5%,G-100%);48(C-100%);60(C-10%,T-100%);62(C-45%,T-97%);66(G-100%);69(A-17%,C-100%);72(A-11%,C-100%);73(G-11%,T-100%);79(C-16%,T-100%);90(C-100%);92(G-100%,T-10%);95(A-14%,T-100%);102(G-15%,A-99%);105(T-100%);120(A-100%);122(C-10%,A-100%);129(C-19%,T-100%);189(C-100%);192(C-98%,T-32%);240(G-98%,A-32%); | G;C;T;T;G;C;C;T;T;C;G;T;A;T;A;A;T;C;C;G | G;C;T;C;G;A/C;C/A;T/G;T;C;G;T;A;T;A;A;T/C;C;C/T;A/G |
| 394 | TCTCATCCGGTTTATCTTTTTAAATTGT | ATTCTGCTCAAATAGTAGTCCACGA | 83(G-8%,T-100%);89(T-100%);90(G-79%,C-29%);94(A-29%,G-80%);137(G-100%);139(G-100%);175(T-100%);213(A-100%);215(C-100%); | T;T;G;G;G;G;T;A;C | T;T;G;G;G;G;T;A;C |
| 395 | GACGAAGACCGCCAAAGCTA | GACACGTTCCCCTGATTTGAAC | 59(G-100%);60(C-8%,T-100%);67(C-100%,T-8%);68(G-100%);69(C-100%);70(A-100%);77(C-99%,T-34%);92(T-100%);103(T-100%);110(A-100%);145(A-14%,G-100%);158(A-99%,C-12%);168(A-26%,C-99%);200(C-100%);208(G-20%,A-100%); | G;T;C;G;C;C/A;C;T;T;G/A;G;C/A;C;C;A | G;T;C;G;C;A;T/C;T;T;A;G;A;C;C;A |
| 396 | AACATCAAATGGAATTAATCACCGT | CATCTGGTAGAGGGAAAGGCATTA | 48(A-99%,T-5%);49(C-18%,T-95%);51(A-7%,T-95%);82(G-100%);107(T-100%);140(C-100%); | A;T;T;G;T;C | A;T;T;G;T;C |
| 397 | TCCGAACTTTTGATTGTTGGATGAT | TGTCATGAAGATGGATTAGTTGCTC | 41(A-87%,G-21%,C-16%);53(A-84%,T-66%);66(A-100%);72(A-66%,C-84%);90(C-100%);99(A-6%,C-99%);105(A-99%);175(a-96%,T-7%);179(A-9%,g-100%);180(G-99%);186(A-7%,C-96%);187(G-80%,A-54%);207(A-99%);219(C-100%);226(G-88%,T-16%);227(A-6%,C-99%);236(C-93%,T-13%); | A;T/A;A;C/A;C;C;A;A;G;G;C;A/G;A;T/C;G;C;C | C;A;A;C;C;C;A;A;G;G;C;A;A;C;T;C;T |
| 398 | GTCCGGACAAAATCTGAAAGAACTA | GCTGCATGCTATTAATTCCTCCC | 38(C-100%,T-9%);42(T-100%);72(T-100%);76(A-100%);85(g-100%);97(G-15%,a-100%);103(A-9%,g-100%);113(g-100%);116(G-100%);119(A-100%);122(G-100%,A-13%);136(C-100%);156(C-100%);159(A-8%,C-100%);168(T-100%);173(A-100%);205(t-100%);208(A-100%);209(G-100%);218(G-100%);226(G-100%);237(G-100%); | C;T;T;A;G;A;G;G;G;A;G;C;C;C;T;A;T;A;G;G;G;G | T/C;T;T;A;G;A;G/A;G;G;A;G/A;C;C;C/A;T;A;T;A;G;G;G;G |
| 399 | AATTTTGAAATACAATGCGCTTTGC | ACTCCTGAAAAGATGATTCTCGAGG | 66(A-8%,G-100%);69(G-100%);88(A-100%);94(t-100%);96(G-100%,a-31%);104(C-22%,a-100%);114(A-100%);147(C-100%);150(C-16%,T-100%);153(G-25%,T-100%);156(A-100%);163(C-100%,A-30%);165(C-100%);166(G-100%);167(G-100%);186(G-64%,A-96%); | G;G;A;T;A/G;A;A;C/T;T;T/G;A;A/C;C;G;G;A | G;G;A;T;G;A;A;C;T;T;A;C;C;G;G;G |
| 400 | AAGCATTGAGATGACAATCAACACA | GGCGATTATTCATTCCCTTTGTTGA | 39(G-100%);42(A-6%,T-100%);45(T-100%);48(G-100%,T-12%);49(A-100%);55(G-30%,C-99%);94(G-100%);108(A-100%);112(C-100%,G-26%);123(C-100%);124(G-33%,A-99%);134(G-100%,T-6%);162(A-95%,C-60%);167(A-100%,T-6%);182(T-100%);185(A-100%);190(G-95%,C-60%);197(A-6%,G-100%);206(G-93%,A-60%);207(G-99%,A-35%);211(G-100%); | G;T;T;G;A;C;G;A;C;C;A;G;C/A;A;T;A/T;C/G;G;A/G;G;G | G;T;T;G;A;G/C;G;A;C;C;A/G;G;C/A;A;T;A;C/G;G;A/G;G;G |
| 401 | GTCTAAATTGCTCTGCCATCTGTTT | ATACATGCCAAATTGCAATTCCCTT | 44(A-99%,T-30%);54(G-98%,A-49%);74(G-100%);83(G-11%,A-100%);108(G-98%,a-65%);110(T-100%);113(C-98%,t-65%);116(A-11%,c-100%);135(C-98%,a-65%);140(t-100%);156(A-11%,G-100%);180(T-100%);186(A-98%,T-48%);194(G-14%,A-100%);199(A-34%,C-100%);212(G-30%,A-99%);213(C-48%,T-98%);218(C-100%,T-6%);219(A-98%,C-48%);225(G-33%,A-100%); | A/T;-/G;G;A;A/G;T;C/T;C;C/A;T;G;T;A;A/G;C/A;A/G;T;C;A;G/A | A;A/G;G;G/A;A/G;T;T/C;C/A;A/C;T;G/A;T;A/T;A;C;A;T/C;T/C;C/A;A |
| 402 | GATCACCGACAAACTGATGAAGATT | ATCCCCCACCTTTTCGATTAATAGG | 38(G-100%);42(A-40%,T-100%);43(T-100%);44(C-100%);47(C-100%);49(C-100%);52(A-16%,C-100%,T-10%);55(G-100%);58(A-100%);63(A-100%);65(C-96%,A-56%);69(A-100%);71(C-100%);74(C-100%,T-10%);75(G-10%,A-100%);76(G-100%);80(A-20%,G-100%);82(G-12%,C-100%);83(C-100%);87(T-100%);88(A-10%,G-100%);89(G-12%,A-100%);94(G-99%,A-17%);96(A-100%,T-17%);97(G-46%,T-97%);102(A-97%,G-39%);104(C-100%);106(C-100%);107(C-12%,T-100%);109(G-10%,A-100%);112(C-100%);115(C-100%,T-10%);119(A-12%,T-100%);121(G-100%);122(G-100%);133(A-100%);139(T-100%);140(C-100%);142(A-12%,G-100%);146(C-9%,A-100%);148(T-100%);155(C-100%);157(C-100%);158(A-97%,G-48%);188(G-100%);196(C-12%,T-100%);197(C-100%);200(G-17%,C-100%);201(A-27%,G-99%);210(C-7%,T-100%);211(A-7%,C-100%);213(G-10%,A-100%);218(C-100%);219(T-100%);220(G-100%);221(T-100%);223(C-100%);224(G-100%); | G;T;T;C;C;C;C/A;G;A;A;A/C;A;C;C;A;G;G;C;C;T;G;A;G/A;A;G/T;G/A;C;C;T;A;C;C;T;A/G;G;A;T;C;G;A;T;C;C;A/G;G;T;C;C;A/G;T;C;A;C;T;G;T;C;G | G;T;T;C;C;A/C;T/C;G;A;G/A;C/A;A;C;T/C;G/A;G;G/A;G/C;C;T;G/A;G/A;A/G;A;G/T;G/A;C;C;C/T;G/A;C;C/T;A/T;G;G;A;T;C;G/A;A;T;C;C;G/A;G;C/T;C;C;G;T;C;G/A;C;T;G;T;C;G |
| 403 | AAGGGCAAGAAAGTTTTGTAAATCT | AGACGGTTTGCATCATTTCTGTTT | 41(G-19%,A-100%);42(A-19%,G-100%);48(C-18%,G-100%);55(a-100%);59(t-100%);63(g-100%,T-18%);97(A-19%,G-100%);104(C-100%);105(G-19%,A-100%);119(A-46%,G-100%);120(C-100%);121(C-19%,T-100%);124(A-19%,G-100%);128(G-93%,A-73%);136(G-17%,A-100%);139(G-19%,T-100%);145(T-100%);148(G-100%);153(C-50%,T-99%);154(A-46%,G-100%);172(A-5%,G-100%);173(G-19%,A-100%);180(G-25%,A-100%);188(A-100%,T-13%);190(A-29%,G-99%);192(C-100%,T-19%);210(C-98%,G-20%);212(A-100%,T-19%);218(A-19%,G-100%);219(A-36%,G-100%);222(C-100%,T-15%);223(A-15%,T-100%);225(C-100%,T-46%);226(A-13%,G-100%);227(C-47%,T-100%);231(C-42%,A-100%);233(A-97%,G-61%); | A;G;G;A;T;G;G;C;A;A/G;C;T;G;G/A;A;T;T;G;T/C;A/G;G;A;A;A;G;C;C/G;A;G;A/G;C;T;T/C;G;T;C/A;G/A | A;G;G;A;T;G;G;C;A;G;C;T;G;A/G;A;T;T;G;C/T;G;G;A;A;A/T;G/A;C;C/G;A;G;G;C;T;C;G/A;T/C;A;A/G |
| 404 | CTTCATCTGGATCTCGCTCTGG | GAAGAGGGAGCCGAGACATG | 43(G-25%,C-100%);46(G-25%,C-100%);55(C-25%,T-100%);61(C-35%,G-100%);73(A-100%);76(C-100%);78(C-100%,T-48%);85(G-100%);112(G-100%);113(A-100%);118(G-98%,C-44%);124(G-100%);127(T-100%);131(C-99%,A-22%);136(C-100%,T-12%);151(C-43%,T-98%);157(C-100%,T-25%);163(C-100%);190(A-6%,G-100%); | C;C;T;G;A;C;C;G;G;A;C/G;T/G;T;C/A;C;C/T;C;C;G | C/G;G/C;T/C;G;A;C;C;G;G;A;C;G;T;C/A;T/C;C;C/T;C;G |
| 405 | TGTTGTCGTTGTAAAGCGTAGAAAA | GCACGCGGTTTTAGAAAATGATTAA | 38(G-17%,A-100%);46(G-100%);49(A-100%);65(A-100%,T-8%);69(A-99%,G-52%);100(T-100%);101(T-100%);102(G-100%);109(A-8%,G-100%);112(G-100%);113(T-100%);115(T-100%);123(C-100%,T-9%);125(T-100%);155(C-9%,G-100%);157(C-6%,T-100%);168(C-16%,G-100%);195(G-100%);196(C-16%,T-100%);201(G-100%);225(G-100%,T-31%);226(A-100%); | A;G;A;A;A/G;T;T;G;G;T/G;T;T;C;T;C/G;T/-;G;G;T;G;G/T;A | A;C/G;C/A;A;G/A;T/C;T;G;G;G;T/C;T;C;A/T;G/C;T/-;G;G;T;G;G/T;A/G |
| 406 | AAGGAAGATTTCTAAAGAAGTGCCA | TACCTCCTGATAGAATTCCTCCGAG | 78(G-100%);95(C-100%);102(T-100%);108(G-100%);111(C-100%);174(C-100%);186(T-100%);192(T-100%);203(A-62%,T-41%); | G;C;T;G;C;C;T;T;A | G;C;T;G;C;C;T;T;A |
| 407 | GGCCTCTGGTTATTTCCTTGAAATC | CCAAATCGTCATCCTCCCACTC | 37(C-100%);38(G-100%);69(G-100%,T-13%);72(A-51%,T-97%);94(G-100%,t-17%);95(G-100%,a-17%);98(G-100%,a-17%);99(A-100%,t-17%);100(G-100%,t-13%);105(A-98%,C-13%);145(C-100%,T-13%);157(A-95%,T-65%);158(G-6%,A-100%);171(G-100%);174(C-100%);181(T-100%);182(G-100%);183(A-100%);184(A-100%);186(A-100%);187(C-8%,G-100%);217(G-100%,A-13%);229(G-8%,C-100%); | C;G;G;T;G;G;G;A;G;A;C;A;A;G;C;T;G;A;A;A;G;G;C | C;G;G;T;G;G;G;A;G;A;C;A;A;G;C;T;G;A;A;A;G;G;C |
| 408 | TATCCATTGGCGAACTATACCATGG | AGAATGCTGTAGAAAATTACACCTTT | 37(G-100%);44(C-99%);56(C-8%,T-100%);67(A-100%);73(C-100%);82(T-100%);95(C-15%,T-99%);115(C-100%,T-6%);118(C-99%,T-15%);122(C-19%,T-99%);132(G-100%);160(T-100%);161(T-100%);196(C-47%,T-92%);197(A-15%,G-99%);221(C-99%,T-8%);222(t-100%);230(a-100%); | G;C;T;A;C;T;T;C;C;T;G;T;T;T/C;G;C;T;A | G;C;C/T;A;G/C;T;C/T;C;C/T;C/T;G;T;T;T/C;A/G;C;T;A |
| 409 | GCATAATTCACCTTCTTCACCCTG | AGCAAAAGAGCTTTAAAATATCTCTGA | 59(C-100%);70(A-10%,c-99%);71(C-20%,a-100%);74(A-100%,g-11%);78(a-100%,T-8%);81(a-100%);88(A-11%,g-99%);101(G-100%);103(A-100%);106(G-100%);107(A-9%,C-100%);127(G-100%);133(G-18%,A-99%);145(A-17%,G-100%);156(T-100%);167(T-100%);168(A-9%,G-100%);175(C-100%);176(G-100%);187(C-100%);194(G-100%);195(C-100%);206(A-100%,T-17%); | C;C/A;A;A;A;A;A/G;G;A;G;C;G;A;G;T;T;G;C;G;C;G;C;A | C;A;A;A;A;A;A;G;A;G;C;G;A;G;T;T;G;C;G;C;G;C;A |
| 410 | ATTTGCTCCCAAGAGTTCTCAGAAA | TTCAATGTGGAAAATGTGCAATGAT | 48(A-100%);84(A-100%);94(C-100%);105(T-100%);107(G-100%);121(A-100%);132(C-20%,T-100%);140(G-100%);142(G-100%,A-9%);145(T-100%);158(C-100%,T-7%);164(C-6%,T-100%);165(A-13%,G-100%);190(G-100%);222(g-100%);226(G-100%); | A;A;C;T;G;A;T;G;G;T;C;T;G;G;G;G | A;A;C;T;G;A;C/T;G;G;T;C;T;G;G;G;G |
| 411 | CGAAAGAACTAAGCAGATTCGTGAA | ACAAGTATTGTTACCAAGTGCCTTC | 41(C-14%,G-100%);54(C-12%,T-99%);59(C-22%,A-100%);61(G-100%);64(G-14%,T-100%);66(C-100%,T-14%);69(A-22%,T-100%);85(C-14%,t-100%);87(A-14%,t-100%);96(a-100%);98(g-100%,T-14%);99(c-100%,T-14%);109(G-14%,a-100%);110(G-98%,a-43%);128(A-100%);132(C-99%,A-26%);133(A-22%,G-100%);138(G-100%);141(A-100%);142(T-100%);145(A-22%,g-100%);156(g-62%);161(C-14%,g-100%);162(c-99%,T-38%);163(C-14%,t-100%);169(G-14%,T-100%);171(C-10%,G-100%);180(C-100%);182(G-14%,A-100%);187(A-10%,C-100%);188(A-98%,C-31%,T-14%);190(G-100%);201(C-68%,T-93%);202(A-14%,G-100%);220(C-100%,T-19%);224(G-14%,T-100%); | G;T;A;G;T;C;T;T;T;A;G;C;A;G;A;C;G;G;A;T;G;G/-;G;T/C;T;T;G;C;A;C;A;G;T/C;G;C;T | C/G;C/T;A;G;G/T;C/T;T;C/T;T/A;A;T/G;C/T;A/G;A/G;A;C/A;G;G;A;T;G;-/G;C/G;C;T/C;G/T;G/C;C;A/G;A/C;A/C/T;G;C/T;A/G;C/T;G/T |
| 412 | TGCTTGCATTGTCAAGAAGATTTCT | AACTGAAACAAAATTGCAACACTGA | 37(G-13%,A-100%);38(C-6%,T-100%);58(G-22%,A-100%);77(A-100%,T-22%);89(C-100%);95(G-100%);108(T-100%);114(G-100%);116(A-100%);130(A-23%,T-100%);137(C-100%,T-7%);138(T-100%);141(A-8%,C-100%);150(T-100%);162(T-100%);163(T-100%);167(C-22%,G-29%,T-98%);168(A-100%);174(C-10%,T-100%);183(G-99%,a-28%);202(C-100%);212(A-8%,T-99%);213(A-8%,C-99%);214(C-92%,A-10%,T-19%);215(G-100%,T-10%);218(C-100%);223(G-100%);231(G-100%); | A;T;A;A;C;G;T;G;A;T;C;T;C;T;T;T;C/T;A;T;G;C;T;C;C/T;G;C;G;G | G/A;T;A/G;A/T;C;G;T;G;A;T;C;T;C;A/T;T;T;G/T;A;T;G/A;C;T;C;C;G;C;G;G |
| 413 | TTTCAGGAGTAAATGTTGGAAGCAA | TAAGAACACCCTGAGGAATTCCAAT | 80(G-100%);86(T-100%);99(A-100%);102(G-100%);111(G-21%,A-100%);113(C-100%);130(C-100%,T-17%);131(T-100%);138(A-100%,C-46%);159(G-100%,A-17%);163(T-100%);200(C-17%,T-100%); | G;T;A;G;A;C;C;T;A;G;T;T | G;T;A;G;G/A;C;T/C;T;A/C;A/G;T;T/C |
| 414 | AAATATTTCATAGGGGATGTGTGCG | GAACTGATATTCTGCTCATGGCCTA | 145(T-100%);221(C-100%,T-9%); | T;C | T;C/T |
| 415 | TCGGACATTTTTCTTGTTGGATTGG | GCCGTGAACTCATGATGCACAT | 53(g-100%);77(A-48%,G-100%);78(G-100%);89(G-100%);92(G-17%,C-100%);110(A-100%);135(G-100%,T-12%);155(A-14%,G-100%);158(T-100%);162(G-12%,A-100%);170(T-100%);197(A-46%,G-100%);209(G-100%); | G;A/G;G;G;C;A;G;G;T;A;T;A/G;G | G;G;G;G;C/G;A;G;A/G;T;A;T;G;G |
| 416 | AATACTACATCACCGCCACAACCTA | TTGATGCATGAGTTAACCCAAACAA | 37(A-97%,T-63%);38(C-7%,T-100%);43(T-100%);45(C-6%,T-100%);46(C-99%,T-55%);49(C-100%,T-6%);56(T-100%);61(G-6%,C-100%);63(C-100%);74(C-100%,T-12%);78(G-100%);81(G-100%,T-8%);82(A-6%,G-100%);83(C-100%);84(C-100%,T-9%);85(C-100%,T-47%);91(C-97%,T-62%);99(G-42%,T-100%);102(G-6%,A-100%);104(A-100%);105(G-6%,C-91%,T-67%);106(G-66%,C-92%);129(A-5%,C-100%,T-8%);130(C-99%,T-42%);139(G-100%);147(T-100%);148(C-7%,A-100%);153(G-100%);157(C-100%,T-7%);176(G-100%);178(C-61%,T-97%);179(G-100%);183(G-100%,T-12%);184(T-100%);187(A-7%,T-100%);188(A-12%,C-100%);212(A-6%,c-100%);213(A-7%,t-100%);214(T-100%);215(G-100%);216(A-9%,G-100%);217(C-100%); | A/T;T;T;T;T/C;C;T;C;C;C;G;G;G;C;C;C;T/C;T;A;A;T/C;G/C;C;C/T;G;T;A;G;C;G;C/T;G;G;T;T;C;C;T;T;G;G;C | T/A;T;T;T;C;C;T;C;C;T/C;G;G;G;C;C;C/T;T/C;T/G;A;A;C/T;C/G;T/C;C;G;T;A;G;C;G;T/C;G;T/G;T;T/A;A/C;C;T;T;G;G;C |
| 417 | TGTTGTGCCAAATGCTTGACTC | ATTAAAAGAGTTTGCATCAGGAGCA | 33(C-100%);35(G-100%);59(T-100%);65(C-100%);67(C-100%);69(C-100%);92(G-100%);105(G-100%);113(C-100%);125(G-100%);128(T-100%);137(G-100%);140(A-100%);143(T-100%);145(G-100%);152(G-15%,A-100%);164(T-100%);180(A-100%);181(G-15%,A-100%);194(G-100%);200(C-15%,A-100%);215(G-100%,A-6%); | C;G;T;C;C;C;G;G;C;G;T;G;A;T;G;A;T;A;A;G;A;G | C/G;G;T;C;T/C;C;G;G;C;G;T;C/G;A;T;G;G/A;C/T;A;A/G;G;A/C;G |
| 418 | ACAAATACATTACGAAATTGTAGTAGCT | TGGATGACTTTAAAGGTTTGTTTTTGG | 82(C-100%);83(G-100%);115(C-24%,G-100%);118(A-26%,G-99%);133(A-94%,G-74%);136(C-23%,G-100%);185(A-24%,T-100%);189(A-100%);190(C-82%,G-91%);196(C-14%,A-100%);203(A-99%,T-26%); | C;G;C/G;G/A;G/A;G;T/A;A;G/C;A;T/A | C;G;G;G;A/G;G;T;A;C/G;A;A |

1. 本表最后一行第四列中，“115(C-24%,G-100%)”表示该标记第115位碱基位置（该标记在版本号GCF\_001263595.1的参考基因上起始位置计为1）存在C和G共两种等位变异，且其比例（等位基因型出现次数/品种数量）分别为24%和100%；未列出比例小于或等于5%的等位变异。
2. 本表最后一行第六列中，“C;G;G;G;A/G;G;T;A;C/G;A;A”表示蝴蝶兰品种“小番茄”在第五列所示的第82位、83位、115位、118为位、133位、136位、185位、189位、190位、196位和第203等位变异的碱基分别为C、G、G、G、A和G、G、T、A、C和G、A、A；当使用“小番茄”作为质控样本时，上述信息可作为鉴定结果的参考值。
3.

（资料性）

品种鉴定流程示例

品种鉴定参见以下流程。

* 1. 样品准备

蝴蝶兰品种鉴定的示例样品来源于云南省农业科学院质量标准与检测技术研究所。待测样品实验编号为“MNP-HDL9”；对照样品实验编号为“MNP-HDL11”。

从待测样品与对照样品的植株上分别采集3片叶片，每个叶片约10 mm，装入离心管中。

* 1. DNA提取

采用某公司生产的新型植物基因组DNA提取试剂盒提取蝴蝶兰叶片DNA，具体步骤如下：

1. 向装有叶片的离心管中加入液氮充分碾磨后，加入400 μL缓冲液LP1和6 μL RNase A(10 mg/mL)，漩涡振荡1 min，室温放置10 min。
2. 加入130 μL缓冲液LP2，充分混匀，漩涡振荡1 min。
3. 12,000 rpm离心5 min，将上清移至新的离心管中。
4. 加入1.5倍体积的缓冲液LP3（使用前请先检查是否已加入无水乙醇），立即充分振荡混匀15 s，此时可能会出现絮状沉淀。
5. 将上一步所得溶液和絮状沉淀加入一个吸附柱CB3中（吸附柱放入收集管中），12,000 rpm离心30 s，倒掉废液，吸附柱CB3放入收集管中。
6. 向吸附柱CB3中加入600 μL漂洗液PW （使用前请先检查是否已加入无水乙醇）， 12,000 rpm离心30 s，倒掉废液，将吸附柱CB3放入收集管中。
7. 重复操作步骤f)。
8. 将吸附柱CB3放回收集管中，12,000 rpm离心2 min，倒掉废液。将吸附柱CB3室温放置数分钟，彻底晾干吸附柱中残余的漂洗液。
9. 将吸附柱CB3转入一个干净的离心管中，向吸附膜的中间部分悬空滴加50 μL洗脱缓冲液TE，室温放置2 min~5 min，12,000 rpm离心2 min，将溶液收集到离心管中。产物放于-20℃冰箱，以防DNA降解。
10. DNA质检。用分光光度计测定并计算MNP-HDL9和MNP-HDL11的DNA溶液在260 nm与280 nm处的吸光度比值，分别为1.88和1.72。在260 nm与230 nm处的吸光度比值分别为2.02和1.93；取4 μL DNA在1%的琼脂糖凝胶上电泳，检测DNA条带是否完整，结果如图B.1所示；取1 μL DNA用Qubit荧光定量仪测定MNP-HDL9和MNP-HDL11的DNA浓度，分别为35.2 ng/μL和16.6 ng/μL。



图B.1 MNP-HDL9和MNP-HDL11的DNA电泳图

1. 最左边条带为某公司生产的分子量标准，其由下至上片段大小分别为564 bp，2,027 bp，2,322 bp，4,361 bp，6,557 bp，9,416 bp和23,130 bp。
	1. 多重PCR扩增与文库构建
		1. 多重PCR扩增

采用某公司生产的多重扩增试剂盒进行多重PCR扩增与文库构建，该试剂盒匹配后序步骤中某公司的测序平台，需自备80%乙醇，其余试剂均为试剂盒提供。

由于MNP-HDL9与MNP-HDL11的多重PCR扩增与文库构建实验流程完全一样，因此，除特别说明，下面仅就MNP-HDL9的实验流程进行说明。

1. 配制多重PCR扩增体系。在PCR管中加入4 μL表A.1中的多重PCR引物混合物（每条引物浓度为0.2 μM）、4 μL样品MNP-HDL9的基因组DNA、10 μL GenoPlexs 3×T Master Mix和12 μL 水，振荡混匀。
2. 多重PCR扩增反应。多重PCR扩增程序：95℃，3 min；（95℃，20 s，60℃，4 min）×15个循环；72℃，4 min。反应结束后，获得多重PCR扩增产物。
	* 1. 多重PCR扩增产物纯化
3. 向B.3.1中获得的多重PCR扩增产物中加入12 μL (B.3.1中获得的30 μL多重PCR扩增产物的0.4倍体积) GenoPrep DNA Clean Beads，震荡混匀后，室温静置5 min。
4. 将PCR管置于磁力架上吸附磁珠，直至溶液澄清。
5. 用移液器吸取上清液至新的1.5 mL离心管中，避免吸到磁珠。
6. 向上清液中加入18 μL (B.3.1中获得的30 μL多重PCR扩增产物的0.6倍体积)的GenoPrep DNA Clean Beads，震荡混匀后，室温静置5 min。
7. 用磁力架吸附磁珠，直至溶液澄清。用移液器小心吸取上清液，弃上清，留磁珠。
8. 加入40 μL GenoPlexs BW10 Buffer，悬浮磁珠，室温静置5 min。用磁力架吸附磁珠，直至溶液澄清。用移液器小心吸取上清液，弃上清，留磁珠。
9. 加入100 μL 80%乙醇（现配现用），用移液器小心去除上清液，避免吸到磁珠。
10. 室温放置，直至乙醇挥发干净，避免过干，获得纯化的多重PCR扩增产物。
	* 1. 高通量测序文库构建
11. 向B.3.2中获得的纯化的多重PCR扩增产物中，加入：10 μL GenoPlexs 3×T Master Mix、2 μL 浓度为5 μM 的P5 primer、2 μL 浓度为5μM 的P7 barcode primer（引物中包含样品条形码，样品MNP-HDL9的条形码序列为GGTTGTCTAG）和16 μL水。
12. 将配制好的反应体系震荡混匀并短暂离心，按如下程序进行PCR反应：95℃，3 min；（95℃， 15 s；58℃，15 s；70℃，30 s）×8个循环；72℃，5min。
13. 反应结束后，即构建好30μL样品MNP-HDL9的高通量测序文库。
	* 1. 高通量测序文库纯化
14. 向B.3.3中获得的高通量测序文库中加24 μL (B.3.3中获得的30 μL高通量测序文库的0.8倍体积) GenoPrep DNA Clean Beads，震荡混匀，室温静置5 min。
15. 用磁力架吸附磁珠，直至溶液澄清。用移液器小心吸取上清，弃上清，留磁珠。
16. 加入40 μL GenoPlexs BW07 Buffer，涡旋均匀。
17. 用磁力架吸附磁珠，直至溶液澄清。用移液器小心去除上清，避免吸到磁珠。
18. 加入100 μL 80%乙醇（现配现用），用移液器小心去除上清。室温放置，直至乙醇挥发干净。
19. 加入35 μL 10 mM Tris-HCl（pH = 8.0），充分悬浮磁珠，室温静置5 min。将离心管置于磁力架上，吸附磁珠，将上清液转移至另一新的1.5 mL离心管，获得纯化的高通量测序文库。获得的纯化高通量测序文库直接用于后续实验或置于-20℃ 保存。
20. 高通量测序文库质检。取1 μL纯化的高通量测序文库用Qubit荧光定量仪检测获得MNP-HDL9和MNP-HDL11的浓度分别为28.8ng/μL和24.5 ng/μL。取4 μL纯化的高通量测序文库在3%的琼脂糖凝胶上电泳。本次构建的高通量测序文库条带集中在400 bp左右，无明显非特异扩增条带和引物二聚体残留（图B.2），质量合格。



图B.2 样品MNP-HDL9和样品MNP-HDL11的高通量测序文库电泳图

1. 最左边条带为某公司生产的分子量标准，其由下至上分子量大小分别为100 bp，200 bp，300 bp，400 bp，500 bp和600 bp。
2. 高通量测序文库混合。分别取样品MNP-HDL9和样品MNP-HDL11各100 ng，震荡混匀并离心，获得上机混合测序文库。
	1. 高通量测序
		1. 上机混合测序文库变性

采用某公司生产的高通量测序仪对B.3中获得的上机混合测序文库进行变性。

1. 采用Qubit荧光定量仪测定上机混合测序文库的浓度为26.2ng/μL。该试剂盒推荐文库投入量为1 pmol，根据下面公式计算1 pmol上机混合测序文库对应的质量。1 pmol上机混合测序文库的质量(ng)=$ \frac{DNA主片段长度(bp)}{1000 bp}×660 ng$，其中，DNA主片段长度按400 bp计算，1 pmol上机混合测序文库对应的质量为264 ng，所需体积为264/26.2= 10.1μL。
2. 取10.1μL上机混合测序文库，用 TE Buffer 补充至总体积 48 μL后于PCR扩增仪上95℃变性3 min，获得文库变性产物。
	* 1. 文库变性产物单链环化

按某公司生产的环化试剂盒的操作手册对文库进行环化。

1. 在冰上配制12.1 μL的单链环化反应液，其中包含11.6 μL的 Splint Buffer和0.5 μL的DNA Rapid Ligase。
2. 向上述单链环化反应液中加入B.4.1中获得的文库变性产物，涡旋震荡 6次，每次3 s，瞬时离心将反应液收集至管底后，37℃保温30 min，获得单链环化产物。
	* 1. 酶切消化

对环化产物进行酶切，执行以下步骤。

1. 在冰上配制4.0 μL的酶切消化反应液，其中包含1.4 μL的Digestion Buffer和2.6 μL的Digestion Enzyme。
2. 向酶切消化反应液中加入B.4.2中获得的单链环化产物后，涡旋震荡 6 次，每次3 s，瞬时离心将反应液收集至管底，37℃反应30 min。
3. 反应结束后，加入7.5 μL Digestion Stop Buffer，涡旋震荡6次，每次3 s，瞬时离心将反应液收集至管底，获得酶切消化后的单链环化产物。
4. 将酶切消化后的单链环化产物转移到新的1.5mL离心管中。
	* 1. 单链环化产物纯化

对单链环化产物进行纯化，执行以下步骤。

1. 提前30 min取出 DNA Clean Beads 置于室温，使用前充分震荡混匀。
2. 吸取170 μL DNA Clean Beads 至B.4.3获得的酶切消化后的单链环化产物中，用移液器轻轻吹打至少10次至完全混匀，最后一次应确保将吸头中所有液体及磁珠打入1.5 mL离心管中。
3. 室温孵育10 min。
4. 瞬时离心，将1.5 mL离心管置于磁力架，静置2 min~5 min至液体澄清，用移液器小心吸取并丢弃上清。
5. 保持1.5 mL 离心管置于磁力架上，加入500 μL新鲜配制的80%乙醇漂洗磁珠及管壁，小心吸取并弃上清。
6. 重复步骤（13），尽量吸干管内液体。
7. 保持1.5 mL离心管置于磁力架上，打开1.5 mL离心管管盖，室温干燥，直至磁珠表面无反光、无开裂。
8. 将1.5 mL 离心管从磁力架上取下，加入22 μL TE Buffer进行DNA洗脱，用移液器轻轻吹打至少10次至完全混匀。
9. 室温下溶解10 min。
10. 瞬时离心，将1.5 mL EP管置于磁力架上，静置2 min~5 min至液体澄清，将20 μL上清液转移至新的1.5 mL EP管中，获得纯化的环化产物。纯化的环化产物可在-20℃冰箱储存一个月。
11. 环化产物质检。使用某公司生产的Qubit® ssDNA Assay Kit测定环化产物（为单链DNA）浓度为2.1 ng/μL，按如下公式进行换算环化产物的fmol浓度为15.9 fmol/μL。
12. 环化产物浓度$ C (fmol/μL)= \frac{3030×环化产物质量浓度}{400}=\frac{3030×2.1}{400}=15.9 fmol/μL$
	* 1. 高通量测序

采用某公司生产的高通量测序试剂盒，对环化产物进行高通量测序。

1. 从某公司生产的高通量测序试剂盒中取出 DNB制备缓冲液、DNB聚合酶混合液 I、TE 缓冲液和DNB终止缓冲液，置于冰盒上约0.5 h，待试剂融化后，使用漩涡振荡器震荡混匀5 s后，短暂离心置于冰盒上备用。
2. 取0.2 mL PCR 管，在冰上配制40 μL的反应混合液体系，其中包括2.5 μL的环化文库 ssDNA（$环化文库ssDNA= \frac{ 40 fmol}{环化产物浓度}=\frac{ 40 fmol}{15.9fmol/μL}=2.5 μL$）、17.5μL的 TE 缓冲液和20 μL的DNB 制备缓冲液。
3. 将（22）中获得的混合液体系漩涡振荡器震荡混匀，离心 5 s，置于 PCR 仪中95℃，1 min；65℃，1 min、40℃，1 min和 4℃，10 min。
4. 取出DNB聚合酶混合液 II (LC)置于冰盒上，短暂离心5 s，置于冰盒上备用（请勿将DNB聚合酶混合液II (LC)置于室温，请勿长时间触碰管壁）。
5. 当（23）中PCR 仪达到 4℃后取出PCR管，离心5 s；在冰上加入40 μL DNB 聚合酶混合液 I和4 μL DNB 聚合酶混合液 II (LC），震荡混匀，离心5 s，立即置于 PCR 仪中，在35℃热盖条件下30℃，25 min和4℃，10 min；PCR仪降温至4℃后，立即加入20 μL DNB终止缓冲液，用阔口吸头缓慢地吹打混匀 5~8 次（切勿震荡或剧烈吹打），获得制备好的DNA纳米球（DNB）。
6. DNB浓度测定。采用Qubit® ssDNA Assay Kit 在Qubit荧光定量仪上检测制备好的DNB的浓度为18.5ng/ μL。制备好的DNB可置于4℃保存48小时。
7. DNB加载。取出 DNB 加载缓冲液 I 和 DNB 加载缓冲液 II（如发现 DNB 加载缓冲液 II 中有结晶，使用漩涡振荡器持续剧烈振荡约 1~2分钟至沉淀重新溶解，短暂离心后方可使用），置于冰盒上融化后，漩涡震荡5 s混匀，短暂离心后置于冰盒上备用。
8. 在0.5 mL冻存管中配制DNB加载体系：50 μL的DNB 加载缓冲液 I、50 μL的DNB 加载缓冲液 II、1μL的DNB 聚合酶混合液 II (LC)和100 μL（浓度大于8 ng/μL）制备好的DNA纳米球（DNB）；用阔口吸头缓慢混匀 5~8 次（切勿离心、震荡及剧烈吹打），4℃保存备用。
9. 准备测序试剂槽。取出测序试剂槽，常温水浴解冻3~4小时（或者提前一天将其置于2℃~8℃冰箱解冻）后，置于2℃~8℃冰箱备用；使用前颠倒混匀试剂槽3次，然后将试剂槽置于正前方，前后左右剧烈晃动10~20次，直至试剂中无肉眼可见的分层，尤其是该测序试剂槽的17号试剂和18号试剂；打开试剂槽盖板，使用无尘纸擦净冷凝水。
10. 提前1 h取出dNTPs混合液Ⅲ和dNTPs混合液II，室温融化后置于冰上或 4℃备用；加样前需使用漩涡振荡器震荡5 s混匀，短暂离心（离心到底部即可）后使用；使用前取出DNA聚合酶混合液，置于冰上或4℃备用，加样前需颠倒混匀4~6 次。
11. 使用洁净的1 mL枪头在测序试剂槽的1号和2号孔边缘位置轻轻戳出一个直径约2cm的加样孔位；在1号孔位中加入0.96 mL dNTPs混合液Ⅲ和0.96 mL DNA聚合酶混合液；在2号孔位中加入2.04 mL dNTPs 混合液II和1.02 mL DNA聚合酶混合液；使用配套的透明封口膜将1号和2号加样孔封住（切勿盖住孔位中心位置，避免影响试剂针下降）。
12. 测序试剂槽水平放置在桌面上，双手握住两侧，顺时针摇晃10~20次，再逆时针摇晃10~20 次，期间要确保肉眼可见旋涡，直至该试剂槽中1号孔位中的试剂上下层颜色均匀一致，以保证试剂充分混匀。
13. 使用枪头戳破15号孔的封口膜；用200 μL移液器移取200 μL MDA聚合酶混合液加入到MDA试剂的试剂管中；颠倒混匀4~6次，使其充分混匀，再将混匀液加入15号孔中，加入时确保管底部无气泡，至此即完成测序试剂槽上机前的准备工作。
14. 上机测序。从-20℃冰箱中取出载片包装彩盒，将载片从中取出，拆开真空包装袋；打开载片舱门，一手压住水洗载片两侧，另一手按下载片吸附按钮，待真空释放后，将水洗载片从平台上取出；用空气罐吹净载片平台和载片背面的灰尘（如果平台表面有可见结晶，需要用润湿的无尘纸轻轻擦拭），按下载片吸附按钮，取出新的载片，两孔位置在左侧，一孔位置在右侧，标签位置靠右，双手握住载片两端；载片孔位对应定位柱放置，保持载片空位内壁与定位柱贴合，将载片边框左右两边同时按下，使载片吸附在平台上，确保载片可以牢固吸附，关闭载片舱门。
15. 打开试剂舱舱门，按照试剂槽盖板指示方向，把准备好的测序试剂槽轻轻推进试剂舱，直到推到底部并确认测序试剂槽完全放入；放入要加载的DNB冻存管，关闭试剂舱舱门。
16. 在电脑软件界面上点击“测序”，进入测序参数设置界面，输入DNB编号，选择测序方案“FCL PE150”，点击“下一步”，将光标放置在“试剂槽 ID”文本框，打开试剂舱舱门，使用条码扫描枪扫描测序试剂槽条码录入试剂槽信息，关闭试剂舱舱门；把光标移至“载片 ID”后面的文本框，打开载片舱舱门，扫描载片上的二维码录入载片信息；各项信息确认无误后，点击“开始”；待测序完成后，点击“完成”，并将测序数据拷贝至移动硬盘。
	1. 测序数据拆分

高通量测序仪根据样品条形码的序列，自动将测序数据拆分到样品MNP-HDL9和样品MNP-HDL11。

由于采用双末端测序模式，因此，每个样品的每个测序片段均包括正向和反向测序序列。其中，样品MNP-HDL9的正向和反向测序序列存放文件的名称分别为MNP-HDL9\_1.fq.gz和MNP-HDL9\_2.fq.gz；样品MNP-HDL11的正向和反向测序序列存放文件的名称分别为MNP-HDL11\_1.fq.gz和MNP-HDL11\_2.fq.gz。

* 1. 测序数据比对

蝴蝶兰参考基因组版本为GCF\_001263595.1。

数据比对软件为Bowtie2（版本号 2.1.0，下载地址： https://bowtie-bio.sourceforge.net），需要该软件的索引构建模块bowtie2-build 和序列比对模块bowtie2。

在Linux窗口中输入以下命令行：bowtie2-build GCF\_001263595.1.fa GCF\_001263595.1，构建蝴蝶兰参考基因组索引。

在Linux窗口中输入以下命令行：bowtie2 -q -p 2 -x GCF\_001263595.1 -1 MNP-HDL9\_1.fq.gz -2 MNP-HDL9\_2.fq.gz –S MNP-HDL9.sam，将样品MNP-HDL9的测序数据比对到蝴蝶兰参考基因组上。其中，参数“-q”表示输入文件是fastq格式；参数“-p 2”表示采用2个线程做比对；参数“-x GCF\_001263595.1”指定比对参考基因组序列；参数“-1 MNP-HDL9\_1.fq.gz -2 MNP-HDL9\_2.fq.gz”指定样品MNP-HDL9的测序结果文件；参数“–S MNP-HDL9.sam”把比对结果输入到MNP-HDL9.sam文件中。

比对结果采用SAM（The Sequence Alignment / Map format，序列比对格式）格式保存。SAM文件格式详细说明见<http://samtools.github.io/hts-specs/SAMv1.pdf>。

按类似方法，将样品MNP-HDL11的测序数据比对到蝴蝶兰参考基因组上。

* 1. 测序数据质量控制

若测序片段比对到参考基因组上的位置与标记位点在参考基因组上的位置重合，则判定该测序片段属于该标记位点。

统计每个标记位点的测序片段的数目，作为该标记位点的覆盖倍数。例如，样品MNP-HDL9的第1个标记位点覆盖倍数为529倍。

按上述方法，获得MNP-HDL9所有标记位点的覆盖倍数，计算MNP-HDL9标记位点的平均覆盖倍数C1 = (529+第2个标记位点覆盖倍数+…+第418个标记位点的覆盖倍数)/418=3121.3倍。

由于C1 ≥ 500倍，判定样品MNP-HDL9的标记位点的平均覆盖倍数合格。

每个标记位点所有相同测序片段归为同一个等位基因型，统计该标记位点的每个等位基因型的测序片段的数目。例如，表B.1为样品MNP-HDL9在表A.1中的第17个MNP标记位点的所有等位基因型序列及其测序片段数目。

表B.1中第17个等位基因型的测序片段的数目为693条≥ 20条，判定样品MNP-HDL9的该标记位点为检出标记位点。依次判定样品MNP-HDL9的所有标记位点是否为检出标记位点。

统计样品MNP-HDL9的所有检出标记位点数量为414个，计算检出标记位点的比例R1 = 414/418=99.04%。

由于R1 ≥ 95%，判定样品MNP-HDL9的检出标记位点的比例合格。

由于样品MNP-HDL9的标记位点的平均覆盖倍数和检出标记位点的比例均合格，判定样品MNP-HDL9的测序数据质量合格。

按同样方法，判定样品MNP-HDL11的测序数据质量合格。

表B.1 样品MNP-HDL9第17个MNP标记位点测序片段统计结果

| 序号 | 测序片段数目 | 等位基因型 |
| --- | --- | --- |
| 1 | 693 | CTCTTTAACACGAACAGGAGCTATGGATGAGTTTCTGTTAATCATCTGACTGTTGACAGCAATGTTGGTGTTATTAGAGTCATTGCACTGTTTCTGTCCAACTGTGCCATTGATTTTGGATTGGGTTTTTGCAGTGCCATTGATTTTGGATTGGGTTTTTGCAGTGCTATCAACACCAAGTAACCTTGGTTTCTGCTCTCCTGAATTCTCACAGAAAGCACTCTTGCTAAAATTAGGAGCTTTTCTGGGG |
| 2 | 379 | CTCTTTAACACGAACAGGAGCTATGGATGAGTTTCTGTTAATCGTCTGATTGTTGACAGCAATGTTGGTCTTATTAGAATCATTGCACTGTTTCTGTCCAACTGTGCCATTGATTTTGGATTGGGTCTTTGCAGTGCCATTGATTTTGAAATGGGTTTTTGCAGTGCTATCAACACCAAGTAACCTTGGTTTCTGCTCTCCTGAATTCTCACAGAAAGCACTCTTGCTAAAATTAGGAGCTTTTCTGGGG |
| 3 | 323 | CTCTTTAACACGAACAGGAGCTATGGATGAGTTTCTGTTAATCGTCTGATTGTTGACAGCAATGTTGGTCTTATTAGAATCATTGCACTGTTTCTGTCCAACTGTGCCATTGGTTTTGGATTGGGTTTTTGCAGTGCCATTGATTTTGAAATGGGTTTTTGCAGTGCTATCAACACCAAGTAACCTTGGTTTCTGCTCTCCTGAATTCTCACAGAAAGCACTCTTGCTAAAATTAGGAGCTTTTCTGGGG |
| 4 | 6 | CTCTTTAACACGAACAGGAGCTATGGATGAGTTTCTGTTAATCGTCTGATTGTTGACAGCAATGGTGGTCTTATTAGAATCATTGCACTGTTTCTGTCCAACTGTGCCATTGATTTTGGATTGGGTTTTTGCAGTGCCATTGATTTTGAAATGGGTTTTTGCAGTGCTATCAACACCAAGTAACCTTGGTTTCTGCTCTCCTGAATTCTCACAGAAAGCACTCTTGCTAAAATTAGGAGCTTTTCTGGGG |
| 5 | 4 | CTCTTTAACACGAACAGGAGCTATGGATGAGTTTCTGTTAATCATCTGACTGTTGACAGCAATGGTGGTGTTATTAGAGTCATTGCACTGTTTCTGTCCAACTGTGCCATTGATTTTGGATTGGGTTTTTGCAGTGCCATTGATTTTGGATTGGGTTTTTGCAGTGCTATCAACACCAAGTAACCTTGGTTTCTGCTCTCCTGAATTCTCACAGAAAGCACTCTTGCTAAAATTAGGAGCTTTTCTGGGG |
| 6 | 3 | CTCTTTAACACGAACAGGAGCTATGGATGAGTTTCTGTTAATCGTCTGATTGTTGACAGCAATGTTGGTCTTATTAGAATCATTGCACTGTTTCTGTCCAACTGTGCCATTGGTTTTGGATTGGGTTTTTGCAGTGCCATTGATTTTGAAATGGGTTTTTGCAGTGCTATCAACACCAAGTAACCTTGGTTTCTGCTCTCCTGAATTCTCACAGGAAGCACTCTTGCTAAAATTAGGAGCTTTTCTGGGG |
| 7 | 2 | CTCTTTAACACGAACAGGAGCTATGGATGAGTTTCTGTTAATCATCTGACTGTTGACAGCAATGTTGGTGTTATTAGAGTCATTGCACTGTTTCTGTCCAACTGTGCCATTGATTTTGGATTGGGTTTTTGCAGTGCCATTGATTTTGGATTGGGTTTTTGCAGTGCTATCAACACCAAGTAACCGTGGTTTCTGCTCTCCTGAATTCTCACAGAAAGCACTCTTGCTAAAATTAGGAGCTTTTCTGGGG |
| 8 | 2 | CTCTTTAACACGAACAGGAGCTATGGATGAGTTTCTGTTAATCATCTGACTGTTGACAGCAATGTTGGTGTTATTAGAGTCATTGCACTGTTTCTGTCCAACTGTGCCATTGATTTTGGATTGGGTTTTTGCAGTGCCATTGATTTTGGATTGGGTTTTTGCAGTGCTATCAACACCAAGTAACCTTGGTTTCTGCTCTCCTGAAGTCTCACAGAAAGCACTCTTGCTAAAATTAGGAGCTTTTCTGGGG |
| 9 | 1 | CTCTTTAACACGAACAGGAGCTATGGATGAGTTTCTGTTAATCGTCTGATTGTTGACAGCAATGTTGGTCTTATTAGAATCATTGCACTGTTTCTGTCCAACTGTGCCATTGGTTTTGGATTGGGTTTTTGCAGTGCCATTGATTTTGAAATGGGTTTTTGCAGTGCTATCAACACCAAGTAACCTTGGTTTCTACTCTCCTGAATTCTCACAGAAAGCACTCTTGCTAAAATTAGGAGCTTTTCTGGGG |
| 10 | 1 | CTCTTTAACACGAACAGGAGCTATGGATGAGTTTCTGTTAATCGTCTGATTGTTGACAGCAATGTTGGTCTTATTAGAATCATTGCACTGTTTCTGTACAACTGTGCCATTGGTTTTGGATTGGGTTTTTGCAGTGCCATTGATTTTGAAATGGGTTTTTGCAGTGCTATCAACACCAAGTAACCTTGGTTTCTGCTCTCCTGAATTCTCACAGAAAGCACTCTTGCTAAAATTAGGAGCTTTTCTGGGG |
| 11 | 1 | CTCTTTAACACGAACAGGAGCTATGGATGAGTTTCTGTTTATCATCTGACTGTTGACAGCAATGTTGGTGTTATTAGAGTCATTGCACTGTTTCTGTCCAACTGTGCCATTGATTTTGGATTGGGTTTTTGCAGTGCCATTGATTTTGGATTGGGTTTTTGCAGTGCTATCAACACCAAGTAACCTTGGTTTCTGCTCTCCTGAATTCTCACAGAAAGCACTCTTGCTAAAATTAGGAGCTTTTCTGGGG |

1. 以序号为1的等位基因型序列为参考，其他等位基因型中与之不相同的序列用灰色背景显示。
	1. 标记位点分型

将样品MNP-HDL9第17个标记位点的等位基因型的测序片段数目由高到低排列，其结果如表B.1所示。测序片段数目最多的等位基因型，即表B.1中序号为1的等位基因型称为主等位基因型，其他等位基因型称为次等位基因型。

计算表B.1中序号为2的次等位基因型的测序片段数目与主等位基因型测序片段数目的比值为379/693 = 0.547。由于该比值大于0.2，因此保留该等位基因型。

依次计算表B.1中其他次等位基因型的测序片段数目与主等位基因型测序片段数目的比值。由于获得的比值序号3大于0.2，其余均小于等于0.2，因此保留序号为3的等位基因型，其余的均舍弃。

主等位基因型和所有保留的次等位基因组成样品MNP-HDL9第17个标记位点的基因型，记为：CTCTTTAACACGAACAGGAGCTATGGATGAGTTTCTGTTAATCATCTGACTGTTGACAGCAATGTTGGTGTTATTAGAGTCATTGCACTGTTTCTGTCCAACTGTGCCATTGATTTTGGATTGGGTTTTTGCAGTGCCATTGATTTTGGATTGGGTTTTTGCAGTGCTATCAACACCAAGTAACCTTGGTTTCTGCTCTCCTGAATTCTCACAGAAAGCACTCTTGCTAAAATTAGGAGCTTTTCTGGGG**/**CTCTTTAACACGAACAGGAGCTATGGATGAGTTTCTGTTAATCGTCTGATTGTTGACAGCAATGTTGGTCTTATTAGAATCATTGCACTGTTTCTGTCCAACTGTGCCATTGATTTTGGATTGGGTCTTTGCAGTGCCATTGATTTTGAAATGGGTTTTTGCAGTGCTATCAACACCAAGTAACCTTGGTTTCTGCTCTCCTGAATTCTCACAGAAAGCACTCTTGCTAAAATTAGGAGCTTTTCTGGGG**/**CTCTTTAACACGAACAGGAGCTATGGATGAGTTTCTGTTAATCGTCTGATTGTTGACAGCAATGTTGGTCTTATTAGAATCATTGCACTGTTTCTGTCCAACTGTGCCATTGGTTTTGGATTGGGTTTTTGCAGTGCCATTGATTTTGAAATGGGTTTTTGCAGTGCTATCAACACCAAGTAACCTTGGTTTCTGCTCTCCTGAATTCTCACAGAAAGCACTCTTGCTAAAATTAGGAGCTTTTCTGGGG

按类似的方法，获得样品MNP-HDL9和样品MNP-HDL11的所有标记位点的基因型。

* 1. 计算遗传相似度

样品MNP-HDL11第17个标记位点的基因型为：CTCTTTAACACGAACAGGAGCTATGGATGAGTTTCTGTTAATCATCTGACTGTTGACAGCAATGTTGGTGTTATTAGAGTCATTGCACTGTTTCTGTCCAACTGTGCCATTGATTTTGGATTGGGTTTTTGCAGTGCCATTGATTTTGGATTGGGTTTTTGCAGTGCTATCAACACCAAGTAACCTTGGTTTCTGCTCTCCTGAATTCTCACAGAAAGCACTCTTGCTAAAATTAGGAGCTTTTCTGGGG，判定其与样品MNP-HDL9第17个标记位点的基因型不同。

依次判定样品MNP-HDL9与样品MNP-HDL11的$N\_{ij}=409$个共同检出位点中，每个共同检出位点的基因型是否有差异。统计样品MNP-HDL9与样品MNP-HDL11中均检出的但基因型无任何差异的标记位点的数目$n\_{ij}=$36个，差异位点数为373个。

计算样品MNP-HDL9与样品MNP-HDL11的遗传相似度$GS=\frac{n\_{ij}}{N\_{ij}}×100\%=\frac{36}{409}×100\%=8.8\%$。

* 1. 结果表述

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 序号 | 待测品种 | 对照品种 | 比较位点数 | 差异位点数 | 遗传相似度（GS） | 结论 |
| 样品编号 | 名称 | 样品编号 | 名称 |
| 1 | MNP-HDL9 | / | MNP-HDL11 | / | 409 | 373 | 8.8% | 待测品种与对照品种为不同品种；待测品种与对照品种为非实质性派生品种。 |

