

## Chr9\_AsiSI\_129732990

Blue lettering indicates the region analyzed (minimum 50nts, maximum 100 nts)

### +OHT/PW

#### Clone#18

```
Query 10 CCGGCTGCA-G-ATCAGGCCCCGCCCCTACCTCGCGGCCGACCAATAGCATGGCGCCGAC 67
          || ||||| | |||||||||||||||||||||||||||||||||||||||||
Sbjct 36 CCCGCTGCAGGAATCAGGCCCCGCCCCTACCTCGCGGCCGACCAATAGCATGGCGCCGAC 95

Query 68 TCGGGCTGCATCCAATCCACGCGGGAGGCGCTGCGATCGCTGCGGGTCCCGCCCCAC 127
          |||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct 96 TCGGGCTGCATCCAATCCACGCGGGAGGCGCTGCGATCGCTGCGGGTCCCGCCCCAC 155
                                     AsiSI site
Query 128 GGCTGCAGCATCCTTCAGACCTCGGTCCGGCTTGGGCGGGGCCCGCGGACATTGGCTGGG 187
          |||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct 156 GGCTGCAGCATCCTTCAGACCTCGGTCCGGCTTGGGCGGGGCCCGCGGACATTGGCTGGG 215

Query 188 GTCCCTCGAAGGGAGCACCCCC 209
          ||||||||||||||||
Sbjct 216 GTCCCTCGAAGGGAGCACCCCC 237
```

#### Clone#21

```
Query 11 CCGGCTGCA-G-ATCAGGCCCCGCCCCTACCTCGCGGCCGACCAATAGCATGGCGCCGAC 68
          || ||||| | |||||||||||||||||||||||||||||||||||||||||
Sbjct 36 CCCGCTGCAGGAATCAGGCCCCGCCCCTACCTCGCGGCCGACCAATAGCATGGCGCCGAC 95

Query 69 TCGGGCTGCATCCAATCCACGCGGGAGGCGCTGCGATCGCTGCGGGTCCCGCCCCAC 128
          |||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct 96 TCGGGCTGCATCCAATCCACGCGGGAGGCGCTGCGATCGCTGCGGGTCCCGCCCCAC 155
                                     AsiSI site
Query 129 GGCTGCAGCATCCTTCAGACCTCGGTCCGGCTTGGGCGGGGCCCGCGGACATTGGCTGGG 188
          |||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct 156 GGCTGCAGCATCCTTCAGACCTCGGTCCGGCTTGGGCGGGGCCCGCGGACATTGGCTGGG 215

Query 189 GTCCCTCGAAGGGAGCACCCCC 210
          ||||||||||||||||
Sbjct 216 GTCCCTCGAAGGGAGCACCCCC 237
```

#### Clone#22

```
Query 13 CGCTGCAGGAATCAGGCCCCGCCCCTACCTCGCGGCCGACCAATAGCATGGCGCCGACTG 71
          |||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct 38 CGCTGCAGGAATCAGGCCCCGCCCCTACCTCGCGGCCGACCAATAGCATGGCGCCGACTG 97

Query 72 CGGCTGCATCCAATCCACGCGGGAGGCGCTGCGATCGCTGCGGGTCCCGCCCCACGG 131
          |||||||||||||||||||||||||||||||||||||||||||||||||||
Sbjct 98 CGGCTGCATCCAATCCACGCGGGAGGCGCTGCGATCGCTGCGGGTCCCGCCCCACGG 157
                                     AsiSI site
Query 132 CTGCAGCATCCTTCAGACCTCGGTCCGGCTTGGGCGGGGCCCGCGGACATTGGCTGGGGT 191
```

Sbjct	158		CTGCAGCATCCTTCAGACCTCGGTCCGGCTGGGGCGGGGCCGCGGACATTGGCTGGGGT	217
Query	192	CACCTCGAAGGGAGCACCCC	211	
Sbjct	218	C-CCTCGAAGGGAGCACCCC	237	

Clone#25

Query	9	CCGGCTGCAGG-ATCAGGCCCCGCCCCTACCTCGCGGCCGACCAAATAGCATGGCGCCGA	67
Sbjct	36	CCCGCTGCAGGAATCAGGCCCCGCCCCTACCTCGCGGCCGACC-AATAGCATGGCGCCGA	94
Query	68	CTGCGGCTGCATCCAATCCACGCGGGAGGCGCTG <b>GCGATCGC</b> CTGCGGGTCCCGCCCCCA	127
Sbjct	95	CTGCGGCTGCATCCAATCCACGCGGGAGGCGCTG <b>GCGATCGC</b> CTGCGGGTCCCGCCCCCA	154
		AsiSI site	
Query	128	CGGCTGCAGCATCCTTCAGACCTCGGTCCGGCTTGGGCGGGGCCGCGGACATTGGCTGG	187
Sbjct	155	CGGCTGCAGCATCCTTCAGACCTCGGTCCGGCTGGGGCGGGGCCGCGGACATTGGCTGG	214
Query	188	GGTCCCTCGAAGGGAGCACCCCC	210
Sbjct	215	GGTCCCTCGAAGGGAGCACCCCC	237

Clone#35

Query	22	CGCTGCA-G-ATCAGGCCCCGCCCCTACCTTCGCGGCCGACCAATAGCATGGCGCCGACT	79
Sbjct	38	CGCTGCAGGAATCAGGCCCCGCCCCTACC-TCGCGGCCGACCAATAGCATGGCGCCGACT	96
Query	80	GCGGCTGCATCCAATCCACGCGGGAGGCGCTG <b>GCGATCGC</b> CTGCGGGTCCCGCCCCCAG	139
Sbjct	97	GCGGCTGCATCCAATCCACGCGGGAGGCGCTG <b>GCGATCGC</b> CTGCGGGTCCCGCCCCCAG	156
		AsiSI site	
Query	140	GCTGCAGCATCCTTCAGACCTCGGTCCGGCTGGGGCGGGGCCGCGGACATTGGCTGGGG	199
Sbjct	157	GCTGCAGCATCCTTCAGACCTCGGTCCGGCTGGGGCGGGGCCGCGGACATTGGCTGGGG	216
Query	200	TCCCTCGAAGGGAGCACCCCC	220
Sbjct	217	TCCCTCGAAGGGAGCACCCCC	237

## +OHT/PW + ML216

### Clone#2

```
Query 9 CCNCNGCAGGAATCAGGCCCCGCCCTACCTCGCGGCCGACCAATAGCATGGCGCCGACT 67
      || | ||||| |||||||||||||||||||||||||||||||||||||||
Sbjct 37 CCGCTGCAGGAATCAGGCCCCGCCCTACCTCGCGGCCGACCAATAGCATGGCGCCGACT 96

Query 68 GCGGCTCGCATCCAATCCACGCGGGAGGCGCTGGCGATCGCCTGCGGGTCCC GCCCCCCAC 127
      ||||| ||||||| ||||||| ||||||| ||||||| ||||||| |||||||
Sbjct 97 GCGGCT-GCATCCAATCCACGCGGGAGGCGCTGGCGATCGCCTGCGGGTCCC GCCCCCCAC 155
                        AsiSI site
Query 128 GGCTGCAGCATCCTTCAGACCTCGGTCCGGCTGGGGCGGGGCCGCCGGACATTGGCTGGG 187
      ||||||| ||||||| ||||||| ||||||| ||||||| ||||||| |||||||
Sbjct 156 GGCTGCAGCATCCTTCAGACCTCGGTCCGGCTGGGGCGGGGCCGCCGGACATTGGCTGGG 215

Query 188 GTCCCTCGAAGGGAGCACCCCC 209
      ||||||| |||||||
Sbjct 216 GTCCCTCGAAGGGAGCACCCCC 237
```

### Clone#6

```
Query 19 CGCTGCAG--ATCAGGCCCCGCCCTACCTCGCGGCCGACCAATAGCATGGCGCCGACTG 76
      ||||||| ||||||| ||||||| ||||||| ||||||| ||||||| |||||||
Sbjct 38 CGCTGCAGGAATCAGGCCCCGCCCTACCTCGCGGCCGACCAATAGCATGGCGCCGACTG 97

Query 77 CGGCT-CATCCAATCCACGCGGGAGGCGCTGGCGATCGCCTGCGGGTCCC GCCCCCCACGG 135
      ||||| ||||||| ||||||| ||||||| ||||||| ||||||| |||||||
Sbjct 98 CGGCTGCATCCAATCCACGCGGGAGGCGCTGGCGATCGCCTGCGGGTCCC GCCCCCCACGG 157
                        AsiSI site
Query 136 CTGCAGCATCCTTCAGACCTCGGTCCGGCTGGGGCGGGGCCGCCGGACATTGGCTGGGGT 195
      ||||||| ||||||| ||||||| ||||||| ||||||| ||||||| |||||||
Sbjct 158 CTGCAGCATCCTTCAGACCTCGGTCCGGCTGGGGCGGGGCCGCCGGACATTGGCTGGGGT 217

Query 196 CCCTCGAAGGGAGCACCCCC 215
      ||||||| |||||||
Sbjct 218 CCCTCGAAGGGAGCACCCCC 237
```

### Clone#12

```
Query 18 CCGCTGCA-G-ATCAGGCCCCGCCCTACCTTCGCGGCCGACCAATAGCATGGCGCCGAC 75
      ||||||| | ||||||| ||||||| ||||||| ||||||| ||||||| |||||||
Sbjct 37 CCGCTGCAGGAATCAGGCCCCGCCCTACC-TCGCGGCCGACCAATAGCATGGCGCCGAC 95

Query 76 TCGGGCTGCATCCAATCCACGCGGGAGGCGCTG-----GCGGGTCCC GCCCCCCAC 125
      ||||||| ||||||| ||||||| ||||||| ||||||| ||||||| |||||||
Sbjct 96 TCGGGCTGCATCCAATCCACGCGGGAGGCGCTGGCGATCGCCTGCGGGTCCC GCCCCCCAC 155
                        AsiSI site
Query 126 GGCTGCAGCATCCTTCAGACCTCGGTCCGGCTGGGGCGGGGCCGCCGGACATTGGCTGGG 185
      ||||||| ||||||| ||||||| ||||||| ||||||| ||||||| |||||||
```

Sbjct 156 GGCTGCAGCATCCTTCAGACCTCGGTCCGGCTGGGGCGGGGCCCGGACATTGGCTGGG 215

Query 186 GTCCCTCGAAGGGAGCACCCCC 207

|||||

Sbjct 216 GTCCCTCGAAGGGAGCACCCCC 237

#### Clone#16

Query 7 CGGCCGGCTGCAGGGATCAGGCCCCGCCCTACCTCGCGGCCGACCAATAGCATGGCGCC 66

|| || |||||

Sbjct 33 CGCCCCGCTGCAGGAATCAGGCCCCGCCCTACCTCGCGGCCGACCAATAGCATGGCGCC 92

Query 67 GACTGCGGCTGCATCCAATCCACGCGGGAGACGCTG-**CGAT-GC**--GCGGGTCCCGCCCC 116

|||||

Sbjct 93 GACTGCGGCTGCATCCAATCCACGCGGGAGGCGCTG**GCGATCGC**CTGCGGGTCCCGCCCC 152

AsiSI site

Query 117 CACGGCTGCAGCATCCTTCAGACCTCGGTCCGGCTGGGGCGGGGCCCGGACATTGGCT 176

|||||

Sbjct 153 CACGGCTGCAGCATCCTTCAGACCTCGGTCCGGCTGGGGCGGGGCCCGGACATTGGCT 212

Query 177 GGGGTCCCTCGAAGGGAGCACCCCC 200

|||||

Sbjct 213 GGGGTCCCTCGAAGGGAGCACCCCC 236

#### Clone#18

Query 9 CGGCCGGCTGCAGGA-TCAGG-CCCGCCCCTACCTCGCGGCCGACCAATAGCATGGCGCC 66

|| || |||||

Sbjct 33 CGCCCCGCTGCAGGAATCAGGCCCCGCCCTACCTCGCGGCCGACCAATAGCATGGCGCC 92

Query 67 GACTGCGGCTGCA-CC-ATCCACGCG--G-CGCTG**GCG-TCGC**CTGCGGGTCCCGCCCC 116

|||||

Sbjct 93 GACTGCGGCTGCATCCAATCCACGCGGGAGGCGCTG**GCGATCGC**CTGCGGGTCCCGCCCC 152

AsiSI site

Query 117 CACGGCTGCAGCATCCTTCAGACCTCGGTCCGGCTGGGGCGGGGCCCGGACATTGGCT 176

|||||

Sbjct 153 CACGGCTGCAGCATCCTTCAGACCTCGGTCCGGCTGGGGCGGGGCCCGGACATTGGCT 212

#### Clone#23

Query 9 CCGGCTGCAGG-ATCAGGCCCCGCCCTACCTCGCGGCCGACCAATAGCATGGCGCCGA 67

|| |||||

Sbjct 36 CCCGCTGCAGGAATCAGGCCCCGCCCTACCTCGCGGCCGACC-AATAGCATGGCGCCGA 94

Query 68 CTGCGGCTGCATCCAATCCACGCGGGAGGCGCTG**GCGATCGC**CTGCGGGTCCCGCCCCCA 127

|||||

Sbjct 95 CTGCGGCTGCATCCAATCCACGCGGGAGGCGCTG**GCGATCGC**CTGCGGGTCCCGCCCCCA 154

AsiSI site

Query 128 CGGCTGCAGCATCCTTCAGACCTCGGTCCGGCTTGGGCGGGGCCCGGACATTGGCTGG 187

|||||

Sbjct 155 CGGCTGCAGCATCCTTCAGACCTCGGTCCGGCTGGGGCGGGGCCCGGACATTGGCTGG 214

Query 188 GGTCCCTCGAAGGGAGCACCCCC 210

|||||

Sbjct 215 GGTCCCTCGAAGGGAGCACCCCC 237

Query	22	CGCTGCAGGAATCAGGCCCGCCCCCTACCTCGCGGCCGACCAATAGCATGGCGCCGACTG	78
Sbjct	38	CGCTGCAGGAATCAGGCCCGCCCCCTACCTCGCGGCCGACCAATAGCATGGCGCCGACTG	97
Query	79	CGGCTGCATCCAATCCACGCGGGAGGCGCTG <b>GCGATCGC</b> CTGCGGGTCCCGCCCCACGG	138
Sbjct	98	CGGCTGCATCCAATCCACGCGGGAGGCGCTG <b>GCGATCGC</b> CTGCGGGTCCCGCCCCACGG	157
		AsiSI site	
Query	139	CTGCAGCATCCTTCAGACCTCGGTCCGGCTGGGGCGGGGCCGCCGACATTGGCTGGGGT	198
Sbjct	158	CTGCAGCATCCTTCAGACCTCGGTCCGGCTGGGGCGGGGCCGCCGACATTGGCTGGGGT	217
Query	199	CTCCTCGAAGGGAGCACCCC	218
Sbjct	218	C-CCTCGAAGGGAGCACCCC	237

Query	20	CCGCTGCA-G-ATCAGGCCCCCCCTTACCTCGCGGCCGACCAATAGCATGGCGCCGACT	77
Sbjct	37	CCGCTGCAGGAATCAGGCCCGCCCCCTACCTCGCGGCCGACCAATAGCATGGCGCCGACT	96
Query	78	GCGGCTGCATCCAATCCACGCGGGAGGCGCTG <b>GCGATCGC</b> CTGCGGGTCCCGCCCCCAGC	137
Sbjct	97	GCGGCTGCATCCAATCCACGCGGGAGGCGCTG <b>GCGATCGC</b> CTGCGGGTCCCGCCCCCAGC	156
		<b>AsiSI site</b>	
Query	138	GCTGCAGCATCCTTCAGACCTCGGTCCGGCTGGGGCGGGGCCCGCGGACATTGGCTGGGG	197
Sbjct	157	GCTGCAGCATCCTTCAGACCTCGGTCCGGCTGGGGCGGGGCCCGCGGACATTGGCTGGGG	216
Query	198	TCCCTCGAAGGGAGCACCCC	217
Sbjct	217	TCCCTCGAAGGGAGCACCCC	236

[illegible]

Sbjct	157	GCTGCAGCATCCTTCAGACCTCGGTCCGGCTGGGGCGGGGCCCGGACATTGGCTGGGG	216
Query	197	TCCCTCGAAGGGAG	210
Sbjct	217	TCCCTCGAAGGGAG	230

Clone#34

Query	22	CGCTGCA-G-ATCAGGCCCCGCCCCTACCTTCGCGGCCGACCAATAGCATGGCGCCGACT	79
Sbjct	38	CGCTGCAGGAATCAGGCCCCGCCCCTACC-TCGCGGCCGACCAATAGCATGGCGCCGACT	96
Query	80	GCGGCTGCATCCAATCCACGCGGGAGGCGCTG <b>GCGATCGC</b> CTGCGGGTCCCGCCCCACG	139
Sbjct	97	GCGGCTGCATCCAATCCACGCGGGAGGCGCTG <b>GCGATCGC</b> CTGCGGGTCCCGCCCCACG	156
		<b>AsiSI site</b>	
Query	140	GCTGCAGCATCCTTCAGACCTCGGTCCGGCTGGGGCGGGGCCCGGACATTGGCTGGGG	199
Sbjct	157	GCTGCAGCATCCTTCAGACCTCGGTCCGGCTGGGGCGGGGCCCGGACATTGGCTGGGG	21
Query	200	TCCCTCGAAGGGAGCACCCCC	220
Sbjct	217	TCCCTCGAAGGGAGCACCCCC	237