| ΔC   | GTGAAGGCTGCGACCCCGGG-------------------------- | 20 |
|------|-----------------------------------------------|----|
| WT   | GTGAAGGCTGCGACCCCGGGGGTGACCATCTCTTAGACTGACTTCGCCGTTCAACGC | 60 |
| W390A| GTGAAGGCTGCGACCCCGGGGGTGACCATCTCTTAGACTGACTG_{CAGCGTTCAACGC} | 60 |
| aa   | V K A A D P G G G P S S R L T W R V Q R      |    |

| ΔC   | ----------------------------------------------- |    |
|------|-----------------------------------------------|----|
| WT   | TCTCAAAACCCCTTTAAAAATAAGGTAAACCCCGGAGCCGCCCCTAATCATGGCTCTGTCTTA | 120 |
| W390A| TCTCAAAACCCCTTTAAAAATAAGGTAAACCCCGGAGGGCCGCCCCCTAATCATGGCTCTGTCTTA | 120 |
| aa   | S Q N P L K I R L T R E A P *                 |    |

| ΔC   | CATTGAGCAAAACCCTTTAAAAACAAAGTAGAAAAACCACCGAGGCTCTGGATTCTCCCTTAATTTC | 99  |
|------|---------------------------------------------------------------------|-----|
| WT   | CATTGAGCAAAACCCTTTAAAAACAAAGTAGAAAAACCACCGAGGCTCTGGATTCTCCCTTAATTTC | 180 |
| W390A| CATTGAGCAAAACCCTTTAAAAACAAAGTAGAAAAACCACCGAGGCTCTGGATTCTCCCTTAATTTC | 180 |
| aa   |                                                                         |    |

| ΔC   | TTCTGATGCTCACAGGGGTCTAGT | 122 |
|------|--------------------------|----|
| WT   | TTCTGATGCTCACAGGGGTCTAGT | 203 |
| W390A| TTCTGATGCTCACAGGGGTCTAGT | 203 |
| aa   |                                                                         |    |
### Table A

| Clone # | WT MLV | W390A MLV | Clone # | WT MLV | W390A MLV |
|---------|--------|-----------|---------|--------|-----------|
| 1       | 613    | 196       | 17      | 7      | 2         |
| 2       | 328    | 87        | 18      | 5      | -         |
| 3       | 82     | 49        | 19      | 5      | -         |
| 4       | 54     | 20        | 20      | 4      | -         |
| 5       | 41     | 13        | 21      | 4      | -         |
| 6       | 31     | 10        | 22      | 4      | -         |
| 7       | 26     | 8         | 23      | 4      | -         |
| 8       | 21     | 6         | 24      | 4      | -         |
| 9       | 19     | 5         | 25      | 4      | -         |
| 10      | 16     | 5         | 26      | 2      | -         |
| 11      | 15     | 4         | 27      | 2      | -         |
| 12      | 14     | 4         | 28      | 2      | -         |
| 13      | 12     | 4         | 29      | 2      | -         |
| 14      | 12     | 2         | 30      | 2      | -         |
| 15      | 9      | 2         | 31      | 2      | -         |
| 16      | 8      | 2         | 32      | 2      | -         |

### Graph B

#### Intergenic

#### Gene

#### Promoter

#### Enhancer
A

5' - Thap2 – 14470 bp - 3'
5' - Pim1 – 4415 bp - 3'
5' - Myc – 5021 bp - 3'
5' - Notch1 – 45388 bp - 3'
5' - Ppp1r16b – 99200 bp - 3'

B

|          | Lmo2     | Mecom2   | Prdm16   |
|----------|----------|----------|----------|
|          | Expression normalized to GAPDH |          |          |
| 63.2 #13 | 4.0      | 1.0      | 1.0      |
| 63.2 #14 | 2.0      | 0.5      | 1.0      |
| WT #15   | 1.0      | 0.5      | 1.0      |
| WT #16   | 1.0      | 0.5      | 1.0      |
| W390A #17| 1.0      | 0.5      | 1.0      |
| PBS      | 1.0      | 0.5      | 1.0      |