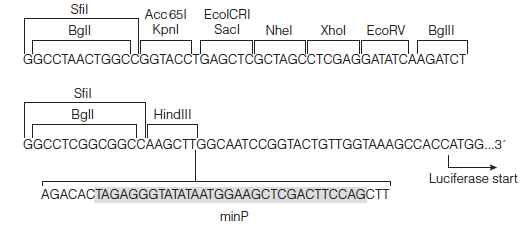
**WMB8E-348:Users:ludwig:Desktop:Screen Shot 2017-10-23 at 21.19.08.png**

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**CCND3 locus** rs9349205 G and A rs112233623 C and T

**XhoI** CTCGAG **BglII** AGATCT Overhang

**To maintain genomic orientation add BglII to 5’end**

**Haplotype\_1\_CG**

AGCTAGCTAGATCTTATTACTGTTGCAAAAGCCTCCCAGAGAGCCTCATCTTCACATTGCTTCCAGATAGATCCAAATCAATGGCCCAAGGCCATCTGATTAATCTCTCACAGACACTCCTTTCGTCTTCAGTCCAAGGACCTGCTTATCAGGTTAAATTTAAAAGACAACCAGCCTGGTTTTCAAAATTGCCTTCAAGAAGAGGCCCCAGCAGCCCTAACCAATTTTATCTCAGCCCTAGCACTCCAGCCCACCTCTGGGCCTTATCACCCACCGCTGGCATCCTGCTTCTTTCTCCAAATCCAGCCTCTTCCCTTAAGGCCTAGCTCCTGGCCCATCTGTTCCATGAAGCTCGCAGGGTGTGGAATTGAAAGATCCTCGAGAGCTAGCT

**Haplotype\_2\_TG**

AGCTAGCTAGATCTTATTACTGTTGCAAAAGCCTCCCAGAGAGCCTCATCTTCACATTGCTTCCAGATAGATCCAAATCAATGGCCCAAGGCCATCTGATTAATCTCTCACAGATACTCCTTTCGTCTTCAGTCCAAGGACCTGCTTATCAGGTTAAATTTAAAAGACAACCAGCCTGGTTTTCAAAATTGCCTTCAAGAAGAGGCCCCAGCAGCCCTAACCAATTTTATCTCAGCCCTAGCACTCCAGCCCACCTCTGGGCCTTATCACCCACCGCTGGCATCCTGCTTCTTTCTCCAAATCCAGCCTCTTCCCTTAAGGCCTAGCTCCTGGCCCATCTGTTCCATGAAGCTCGCAGGGTGTGGAATTGAAAGATCCTCGAGAGCTAGCT

**Haplotype\_3\_CA**

AGCTAGCTAGATCTTATTACTGTTGCAAAAGCCTCCCAGAGAGCCTCATCTTCACATTGCTTCCAGATAGATCCAAATCAATGGCCCAAGGCCATCTGATTAATCTCTCACAGACACTCCTTTCGTCTTCAGTCCAAGGACCTGCTTATCAGGTTAAATTTAAAAGACAACCAGCCTGGTTTTCAAAATTGCCTTCAAGAAGAGGCCCCAGCAGCCCTAACCAATTTTATCTCAGCCCTAGCACTCCAGCCCACCTCTGGGCCTTATCACCCACCACTGGCATCCTGCTTCTTTCTCCAAATCCAGCCTCTTCCCTTAAGGCCTAGCTCCTGGCCCATCTGTTCCATGAAGCTCGCAGGGTGTGGAATTGAAAGATCCTCGAGAGCTAGCT

**Haplotype\_4\_TA**

AGCTAGCTAGATCTTATTACTGTTGCAAAAGCCTCCCAGAGAGCCTCATCTTCACATTGCTTCCAGATAGATCCAAATCAATGGCCCAAGGCCATCTGATTAATCTCTCACAGATACTCCTTTCGTCTTCAGTCCAAGGACCTGCTTATCAGGTTAAATTTAAAAGACAACCAGCCTGGTTTTCAAAATTGCCTTCAAGAAGAGGCCCCAGCAGCCCTAACCAATTTTATCTCAGCCCTAGCACTCCAGCCCACCTCTGGGCCTTATCACCCACCACTGGCATCCTGCTTCTTTCTCCAAATCCAGCCTCTTCCCTTAAGGCCTAGCTCCTGGCCCATCTGTTCCATGAAGCTCGCAGGGTGTGGAATTGAAAGATCCTCGAGAGCTAGCT

**Primers for amplification of G-Blocks**

AGCTAGCTAGATCTTATTACTGTTGCAAAAGCCTCCCAGAGAGCCTCATCTTCACATTGCTTCCAGATAGATCCAAATCAATGGCCCAAGGCCATCTGATTAATCTCTCACAGACACTCCTTTCGTCTTCAGTCCAAGGACCTGCTTATCAGGTTAAATTTAAAAGACAACCAGCCTGGTTTTCAAAATTGCCTTCAAGAAGAGGCCCCAGCAGCCCTAACCAATTTTATCTCAGCCCTAGCACTCCAGCCCACCTCTGGGCCTTATCACCCACCGCTGGCATCCTGCTTCTTTCTCCAAATCCAGCCTCTTCCCTTAAGGCCTAGCTCCTGGCCCATCTGTTCCATGAAGCTCGCAGGGTGTGGAATTGAAAGATCCTCGAGAGCTAGCT

OLIGO [start](http://bioinfo.ut.ee/primer3-0.4.0/primer3_www_results_help.html#PRIMER_START)  [len](http://bioinfo.ut.ee/primer3-0.4.0/primer3_www_results_help.html#PRIMER_LEN)  [tm](http://bioinfo.ut.ee/primer3-0.4.0/primer3_www_results_help.html#PRIMER_TM)  [gc%](http://bioinfo.ut.ee/primer3-0.4.0/primer3_www_results_help.html#PRIMER_GC)  [any](http://bioinfo.ut.ee/primer3-0.4.0/primer3_www_results_help.html#PRIMER_ANY)  [3'](http://bioinfo.ut.ee/primer3-0.4.0/primer3_www_results_help.html#PRIMER_REPEAT) [seq](http://bioinfo.ut.ee/primer3-0.4.0/primer3_www_results_help.html#PRIMER_OLIGO_SEQ)

LEFT PRIMER 5 28 60.92 35.71 8.00 6.00 AGCTAGATCTTATTACTGTTGCAAAAGC

RIGHT PRIMER 387 23 60.34 43.48 6.00 2.00 AGCTCTCGAGGATCTTTCAATTC

SEQUENCE SIZE: 391 INCLUDED REGION SIZE: 391

PRODUCT SIZE: 383, PAIR ANY COMPL: 5.00, PAIR 3' COMPL: 1.00

**Order**

CCND3\_FW1 AGCTAGATCTTATTACTGTTGCAAAAGC

CCND3\_RV1 AGCTCTCGAGGATCTTTCAATTC