

**Supplementary Table 5:**  
**Primers used for gene expression, ChIP and Sequenom analyses.**

| Gene expression  | Forward 5-3                         | Reverse 5-3   | Amplicon size | Ref Seq (Amplicon coordinates)   |
|------------------|-------------------------------------|---|---------------|--|
| <i>GAPDH</i>     | CCACATCGCTCAGACACCAT                | ACCAGGCGCCCAATACG                                       | 71 bp         | NM_002046.3 (85-155)   |
| <i>ALAS-1</i>    | CCACACACCCCAGATGATGA                | CCCACTTGCTTCCATGTGACT                                   | 63 bp         | NM_000688.4 (2068-2130)<br>NM_199166.1 (1919-1981)                       |
| <i>KLK2</i>      | ACAGCTGCCATTGCCTAAA                 | GTGTCTTCAGGCTCAAACAGGTT                                 | 74 bp         | NM_001002231 & NM_005551.3 (225-298)                                     |
| <i>C15ORF21</i>  | GAACCCTGCTAGAGCCATCAA               | CCGTGAGGCCAGGAACCT                                      | 87 bp         | NR_022014 (553-639)  |
| <i>ERBB3</i>     | ATGGAGACCCCTGGCACAA                 | CTCCCGTACTGTCCGGAAGA                                    | 71 bp         | NM_001982.3 (1299-1369)  |
| <i>RND3</i>      | CTGTGGGACACTTCGGGTTCT               | ACAGCATCCGAATCAGGGTAA                                   | 71 bp         | NM_005168.3 (379-449)  |
| <i>KLK3</i>      | TGTGGGTCCCGGTTGTCTT                 | CCCAGCCTCCCACAATCC                                      | 87 bp         | NM_001648.2, NM_001030047.1,<br>NM_001030048.1 & NM_001030050.1 (43-129) |
| <i>MKRN3</i>     | ATGAGAAGGCCAACCCCAAT                | CCTAATACAGAAGGAATGGTTGCA                                | 72 bp         | NM_005664.3 (1432-1502)  |
| <i>LIMCH1</i>    | CTTCTCCGAGGCGCAGAA                  | CTGTCCGAAAATCTTTATCACCAA                                | 71 bp         | NM_001112718.1, NM_001112717.1 &<br>NM_014988.2 (123-193)                |
| ChIP primers     | Forward 5-3                         | Reverse 5-3   | Amplicon size | Amplicon coordinates (Assembly: Mar.2006)                                |
| <i>KLK2</i>      | CTGTCCAGGAAACCCAGATT                | TTGTTGTCTCAGGCCAGATAGC                                  | 72 bp         | chr19:56,069,033-56,069,104  |
| <i>C15ORF21</i>  | TGAATCTTTTGGTTGGTGAATTTTG           | ACTGACCTAAGCGCCATCATACT                                 | 73 bp         | chr15:43,590,649-43,590,721  |
| <i>ERBB3</i>     | GATTTTCAGTACCCCTAGTTTCGT            | CAACAACCCCTCCAACCTT                                     | 71 bp         | chr12:54,760,840-54,760,910  |
| <i>CAV1</i>      | CATTTCTTATTTTGAAGCGTTTGG            | GCAGGCATGCAGAATTTAACATT                                 | 71 bp         | chr7:115,951,569-115,951,639   |
| <i>CAV2</i>      | GCACTGGGCCAGGATGAA                  | GCCAGCTGCCCTGATAAAGG                                    | 71 bp         | chr7:115,928,870-115,928,940   |
| <i>RND3</i>      | AATGGGTGTCGTGCGTTTAAA               | GGATAGACAAAATGGGCAAAAAGA                                | 71 bp         | chr2:151,051,544-151,051,614   |
| <i>KLK3</i>      | ATTGTTTGCTGCACGTTGGA                | ATCCTCTAGCCCAGAAATATGAGTCT                              | 71 bp         | chr19:56,049,360-56,049,430  |
| <i>LIMCH1</i>    | GGAAATTACCCGCGCTTT                  | TGTGGCGGGTGTTGTTAAGA                                    | 71 bp         | chr4:41,056,612-41,056,682   |
| <i>MKRN3</i>     | GTCAGAGGGACCCAAAAGCA                | GCGCTCGGAGGCTTCTC                                       | 71 bp         | chr15:21,361,872-21,361,942  |
| Sequenom primers | Forward 5-3                         | Reverse 5-3   | Amplicon size | Amplicon coordinates (Assembly: Mar.2006)                                |
| <i>RND3</i>      | aggaagagagGTGGGAATTTTTGGGAGG        | cagtaatacgactcactataggagaaggctTTACCCTCTTTCCTCCTTTTAC    | 249 bp        | chr2:151,051,335-151,051,583   |
| <i>MKRN3</i>     | aggaagagagGTAGAAGGTAGATAAAAGGGGTTGG | cagtaatacgactcactataggagaaggctTCCCTTACTACCTCAACACCTACCT | 386 bp        | chr15:21,361,711-21,362,096  |
| <i>LIMCH1</i>    | aggaagagagAGATTATTATGGGATGGGGAAGTT  | cagtaatacgactcactataggagaaggctACCCTACCTAAAAATCCTTACCCTC | 390 bp        | chr4:41,056,389-41,056,778   |