**Figure 7-source data 2. Primer sequence for RT-qPCR, PCR screening and CRISPR gRNAs target**

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| **RT-qPCR primers** | | | |
| **Gene** | **Sequence** | | |
| *Aldh1a3* | **F -** ACTGGAGCTAGGAGGCAAGAAC | | |
| **R -** GTAGACCTGCTCTTCCACGAAC | | |
| *Sult1e1* | **F -** CTTCCAGGAGATGAAGAACAATCC | | |
| **R -** GGAAGTGGTTCTTCCAGTCTCC | | |
| *Prl5a1* | **F -** ACACTTCATCCCGCTCTGTC | | |
| **R -** CAGAAGGTTTTTCCAGGCAGC | | |
| *Mgst1* | **F -** GGTGAAAAGTCCCAGAAGTGC | | |
| **R -** GCCATCAACACCTCATTGTCC | | |
| *Cdx2* | **F -** GCTCTTTGCCAGGACTGACT | | |
| **R -** CAGCCACCTTGGCTCAAGTA | | |
| *Pdlim3* | **F -** TCATGCTGATGCACAGGACA | | |
| **R -** GCGGTACCAATGGGTTTGAA | | |
| *Creb3l1* | **F -** GTCCCCAGACACTTGGACTG | | |
| **R -** GAACAGTGGTTGCGTTGGTC | | |
| *Cited2* | **F -** ATCGGCTGTCCCTCTATGTG | | |
| **R -** CCATTTCCAGTCCTTCCGTCT | | |
| *Selenbp1* | **F -** GTGAGCAGTTTGCACACCAG | | |
| **R -** GGCTTCTCCCATGTCCCTTT | | |
| *Nov* | **F -** AACAGGAATCGCCAGTGTGA | | |
| **R -** TTTCTTGGTGCGGAGACACT | | |
| *B2m* | **F -** TTCTGGTGCTTGTCTCACTGA | | |
| **R -** CAGTATGTTCGGCTTCCCATTC | | |
| *Gzmc* | **F -** TGTGAGTCCCAGTTCCAAAGTT | | |
| **R -** TGCTCTTTTACACACAAGCGG | | |
| *Gzmd* | **F -** TGTCTGTGGATATTAAGGGGAACA | | |
| **R -** TGTCATTGAGCTTTGGACAGAG | | |
| *Gzme* | **F -** TGTCTCCTTTGCTCTCCTTCAA | | |
| **R -** ATCCACAGACTTAACAAACGCC | | |
| *Gzmf* | **F -** ACATCCATCAATGCAACACAAAG | | |
| **R -** TTGTTACACACGAGGGGTCC | | |
| *Gzmg* | **F -** TTTTAATAGAAAGCATGGCACCA | | |
| **R -** GGCCTCACAGCTTTAGTTCTC | | |
| *Mpzl1* | **F -** GGCTCCACGTGGTGGAAATA | | |
| **R -** TGACTGGGCCCCGGTATAAT | | |
| *Mpzl2* | **F -** TCTCCGTGGGTAAACTGTGC | | |
| **R -** TAGGACAAAGGGCTGTGAGC | | |
| *Tmsb10* | **F -** CGGAAGGCGCGGGAT | | |
| **R -** TCAATGGTCTCTTTGGTCGGC | | |
| *Aqp5* | **F -** ATCCATTGGCTTGTCGGTCA | | |
| **R -** GTCCTACCCAGAAGACCCAGT | | |
| *Gapdh* | **F -** GGGAAATGAGAGAGGCCCAG | | |
| **R -** GAACAGGGAGGAGCAGAGAG | | |
| *Sdha* | **F -** TGGTGAGAACAAGAAGGCATCA | | |
| **R -** CGCCTACAACCACAGCATCA | | |
| *Pik3ca* ex17-18 | **F -** GCTGCAGTTCAACAGCCACA | | |
| **R -** GCAGGACCGAGTGAACAGGT | | |
| *Pik3ca* ex19-20 | **F -** AGGGAGCACAAGAGTACACCA | | |
| **R -** GGCATGCTGCCGAATTGCTA | | |
| **PCR screening primers** | | |  |
| Pik3ca | **F -** ATCCCATGGAGAAAGAGACCAT | | |
| **R -** GGTTACTTCTTTTGTAGGTTGCAC | | |
| **CRISPR gRNAs target sequences** | |  | |
| *Pik3ca* (exon 18-19) | Upstream exon 18 | CACCGCGGAGTGGCTGCGGCCAAAC | |
| Upstream exon 18 | CACCGTCAGCCGTATTTCCCCAGTT | |
| Downstream exon 19 | CACCGTCTCTTCTGTCCGATGTCG | |
| Downstream exon 19 | CACCGTGGTCACGCACACACGGTCT | |