**S5 Table:** Real time PCR primers used to validate RNA sequencing fold change results:

|  |  |  |
| --- | --- | --- |
| Gene | Forward Primer | Reverse Primer |
| ALDOA  | CCAAGGGCGGTGTTGTGGGC | CTTCTTGTACTGGGCACAGC |
| ALDOB  | CAAGGTGGAAAACACTGAAG | GGTCTCGTGGAAAAGGATCA |
| ENO1  | GCCATGCAGGAGTTCATGAT | CCATATTTCTCCTTGATGAC |
| ENO2  | GGAGCTGAGGGATGGAGACA | CCACAGAGAGACCTGAGCTG |
| HK2  | CAAAGTGACAGTGGGTGTGG | GCCAGGTCCTTCACTGTCTC |
| IDH3B  | GGAGAAGCTGGAGCAGGTGC | GCATATCATAGGAGGCTAGC |
| MDH1 | GGATGTGGCCATTCTTGTGG | ATCTAAGGCTGCACCCTGGG |
| PCK1 | GGAGTTTGTCAAATGCCTCC | GGTGGGCGATGAGCGTCAGC |
| PDK3  | CCTTTCATTAGCACTAACAT | GTCACCCCCAAACAGAAGTG |
| PDP2  | CACCCTAAACAGTTCCCCAT | TCTGCTCAGGGCTGAGTTGC |
| PFKL  | GTCATCGATGCCATCACCAC | CCTGAGGCCAGTGCAGATAC |
| PGK1 | CCTGCTGGAGAACCTCCGCT | AGTGAAGCTCGGAAAGCTTC |
| PRPS1  | CAATCTGCCATGCAGCTGAC | ACTACTGCCTCAAAGCATGC |
| PRPS2  | CTCATCATGATCAATGCCTG | CACGACTCTCTCCTACCTTG |
| RPE  | CCAGGAACCTCAGTTGAGTA | TCTTCCATGAATTTCTGCCC |
| TPI1 | TGGGGCACTCAGAGAGAAGG | GCTTCTCCCCAATGCAGGCG |
| BPGM | CTGGAAGAGCTAGGCCAGGA | GCAGATGGCTTTGAATCATG |
| DLST | GGTTGTCATTAACAACAGTG | GTGACAGATTCTGCAAACGC |
| GALM  | CCCGGAGAGTTAAAAGTCTG | AAGAATGGTTGGTCAGGTTG |
| GSK3A | GGCTTACACGGACATCAAAG | GGAGAACCTTCTTGATGGCG |
| GSK3B | TCCAGACAGGCCACAAGAAG  | TCCTGAATCACAAAGTTTGG |
| IDH1 | CACCAAATGGCACCATACGA | GGTTTTACCCATCCACTCAC |
| PDPR | CTGTGGAGGTGGAATCACGG | AGAGCCAGCAGCCAGCCTGC |
| PGM3 | GGATTATTAGCTGTCCTGAG | GGATCAACCAATTTTACACC |
| PHKG1 | GCTGGGACTCTCCCAAGTCC  | CCTTCTCACTCAAGGTGACC |
| PHKG2 | GACAGCTGAGCGGCTGAGTC  | GGTGATGATGTGGGGGTGGC |
| PYGM | CCGTGCGCACGAACTTCGAT | CGATGAGGATCCTGGTGGACC |
| PGK2 | CCTGCTGGAGAACCTGCGCT | AGTGATGCTCGGAAGGCTTC |
| PHKB  | CTTGAGAGATGGGTATAGAAC | GGAAATTCACATTCAATGCC |
| IDH3B  | GGAGAAGCTGGAGCAGGTGC | GCATATCATAGGAGGCTAGC |
| TALDO1  | GATGGTGGCCAGAGCCAGGC | AGCCTGAATTCCTTCCCAGG |
| ACO2  | GCTTCTGGAAGCCTGGATCT | CACCATTGGGGGTGTGGGAG |
| AGL  | GTACATGTTGGATGCTGCTA | GTAACAAAGACATTGTCCAG |
| GBE1 | GCATTCAGTTGATGGCAATC | TGTAGCTCTTCAGGTGTTCC |
| IDH2  | GTGGAAGAGTTCAAGCTGAAG | GGATGTTTTTGCAGATGATG |
| OGDH | GAAGGCTGCGAGGTACTGATC | TCAGCCGCCCTCTGTGTGGC |
| PCK2  | GGACACGGTACCACTCCCGC | ATGCAGCCTGGAAACCTCTC |
| PDHB | CCTATAGTCTTCAGGGGGCC | GGACTGACCACCTTTAAGCC |
| PGK2 | CCTGCTGGAGAACCTGCGCT | AGTGATGCTCGGAAGGCTTC |
| PGM1 | CCCAATGGAGATTTTGGAATC | GGGCAAACTGCATATTCTTC |
| SDHA  | CGCACTGTGCATAGAGGACG | TGTGGGCAGACGTGCAGCTG |
| SUCLG2  | CATTTTTAAGGAGCAAATTG | GGCTTTTCAAAGGCCCAACG |
| TKT  | CACCGACGTGGCCACTGGCT | CAAGCAATAGACTCGGTAGC |
| ACLY  | GGAGTTTGTGAACAAGATGA | ATCTGCACTCGCATGTCTGG |
| ACO1 | CACTGACATCGTGCTCACCA | GGTCAGCAATGGACAACTGG |
| ALDOC  | GATGGTGCTGACTTTGCCAAG | AGATACTGGCATAACGGGCC |
| CS  | GGCATGAGAGGCATGAAGGGA | TCCCTTCATGCCTCTCATGCC |
| DLAT  | GAGGAGTGTTATATGGCAAAG | AGGCCTCAATATCCTCAGGC |
| DLD  | CTACGAAAGCTGATGGCGGC | CTATTGTATCTTCATCTATCG |
| ENO3  | GGAACTAAGAGACGGAGACA | CCCTTCTCAGCTGCTCCCGC |
| FH  | CAGACCGTGAGATCTACGAT | TTACTTCAGCGGCCGCTCGC |
| G6PC3  | CAGCCCAGGTTCACCAGTTC | AGACAGGGCCGTCATTATGG |
| GPI  | CATCAACTGCTTTGGGTGTG | TGTATTTCCCATTGGACTCC |
| GYS1  | GTGGTTGGCAGGCGTTGGAC | CACCGGCACACAGGTAGCGC |
| H6PD | CCCTCTCCTGCCCCAAGGAC | GATAGTCCTCGGCCGTCTTC |
| IDH3A | GCTTGAAAGGCCCTTTGAAG | ATAGAGACACATGGTCGGAC |
| IDH3G  | CATCGAAACCAACCATAACC | CACGCCTGGAAGGCTCTTAC |
| MDH1B | GCATAACTCTATTTGACAAC | TCGTGCAGATGGAGACACTG |
| MDH2 | GCCAATCCGGGTTTGGATCC | AAAGTCCACCTTGGGGGTGC |
| PC | CCAAGCCCAGAAGTGGTCCG | CGTGATGGGGGCATCTGTGC |
| PDHA1 | GTGATGGTCAGGAAGCTTGC | GCCCCGGGTGAAAGTAAAGC |
| PDK1  | GGATCAGAAACCGACACAAT | ACATTCTGGCTGGTGACAGG |
| PDK3  | CCTTTCATTAGCACTAACAT | GTCACCCCCAAACAGAAGTG |
| PGLS  | GCCTGTGGAGGAGGCGGCTG | CATCGGGGCCCACCCCCAGG |
| PGM2  | CATCTCACAATCCAAAGCAG | TCTAGATTTTCTTCAATAGC |
| PHKA1  | CAGGGTCGTTATGGTTGCTG | AATAGCTTCAGCTCAGCTGG |
| RPIA  | CAGTATGGCTTGACCCTCAG | CTTGATGAGATTGAGATCAG |
| SDHC  | CACCGTGGCACTGGTATTGC | AACCAGGACAACCACTCCAG |
| SUCLA2  | GTTCCCAAAGGATATGTGGC | CTCTACCACCAGCTAAAACC |