

Table S11. The list of the 100 top-predicted genes of the KNN model in the Intra-Pop cross-validation scheme

| Entrez ID | Mean Test R ² | Gene Symbol | Gene Description |
|-----------|--------------------------|---------------|---|
| 91612 | 0.81 | My015 | churchill domain containing 1 |
| 94101 | 0.73 | ORMDL1 | ORM1-like 1 (<i>S. cerevisiae</i>) |
| 6231 | 0.69 | RPS26 | ribosomal protein S26 |
| 93035 | 0.66 | PKHDL1 | polycystic kidney and hepatic disease 1 (autosomal recessive)-like 1 |
| 7367 | 0.65 | UGT2B17 | UDP glucuronosyltransferase 2 family, polypeptide B17 |
| 158160 | 0.63 | MGC88684 | hydroxysteroid (17-beta) dehydrogenase 7 pseudogene 2 |
| 3663 | 0.62 | IRF5 | interferon regulatory factor 5 |
| 3123 | 0.57 | HLA-DRB1 | major histocompatibility complex, class II, DR beta 1 |
| 84288 | 0.55 | RP11-290P14.1 | EF-hand calcium binding domain 2 |
| 9045 | 0.55 | RPL14 | ribosomal protein L14 |
| 7536 | 0.51 | ZNF162 | splicing factor 1 |
| 84833 | 0.50 | USMG5 | upregulated during skeletal muscle growth 5 homolog (mouse) |
| 143570 | 0.49 | XRRA1 | X-ray radiation resistance associated 1 |
| 155368 | 0.46 | WBSCR27 | Williams Beuren syndrome chromosome region 27 |
| 282991 | 0.46 | RP11-316M21.4 | biogenesis of lysosome-related organelles complex-1, subunit 2 |
| 7311 | 0.43 | UBA52 | ubiquitin A-52 residue ribosomal protein fusion product 1 |
| 133383 | 0.42 | MGC33648 | hypothetical protein MGC33648 |
| 829 | 0.41 | CAZ1 | capping protein (actin filament) muscle Z-line, alpha 1 |
| 84545 | 0.41 | MRPL43 | mitochondrial ribosomal protein L43 |
| 84641 | 0.41 | MGC117350 | hippocampus abundant transcript-like 1 |
| 3105 | 0.38 | HLA-A | major histocompatibility complex, class I, A |
| 54879 | 0.38 | STLR | suppression of tumorigenicity 7 like |
| 858 | 0.38 | MGC12294 | caveolin 2 |
| 10494 | 0.37 | YSK1 | serine/threonine kinase 25 (STE20 homolog, yeast) |
| 1965 | 0.37 | EIF2S1 | eukaryotic translation initiation factor 2, subunit 1 alpha, 35kDa |
| 4725 | 0.37 | NDUFS5 | NADH dehydrogenase (ubiquinone) Fe-S protein 5, 15kDa (NADH-coenzyme Q reductase) |
| 55556 | 0.37 | TYMSAS | enolase superfamily member 1 |
| 3127 | 0.36 | HLA-DRB5 | major histocompatibility complex, class II, DR beta 5 |
| 5190 | 0.36 | PXAAA1 | peroxisomal biogenesis factor 6 |
| 162394 | 0.35 | SLFN5 | schlafen family member 5 |
| 219927 | 0.35 | MRPL21 | mitochondrial ribosomal protein L21 |
| 439921 | 0.35 | TMAP1 | matrix-remodelling associated 7 |
| 6199 | 0.35 | STK14B | ribosomal protein S6 kinase, 70kDa, polypeptide 2 |
| 84680 | 0.35 | PHACS | 1-aminocyclopropane-1-carboxylate synthase |
| 10233 | 0.31 | LRRC23 | leucine rich repeat containing 23 |
| 55755 | 0.31 | MCPH3 | CDK5 regulatory subunit associated protein 2 |
| 348094 | 0.30 | MGC120307 | ankyrin repeat and death domain containing 1A |
| 9419 | 0.30 | HSPC139 | postsynaptic protein CRIPT |
| 51101 | 0.29 | CGI-62 | chromosome 8 open reading frame 70 |
| 84314 | 0.29 | TMEM107 | transmembrane protein 107 |
| 51074 | 0.28 | MMRP19 | APAF1 interacting protein |
| 64847 | 0.28 | Tisp78 | spermatogenesis associated 20 |
| 115024 | 0.27 | NT5C3L | 5'-nucleotidase, cytosolic III-like |
| 255403 | 0.26 | ZNF718 | zinc finger protein 718 |
| 261726 | 0.26 | TIPRL | TIP41, TOR signalling pathway regulator-like (<i>S. cerevisiae</i>) |
| 2635 | 0.26 | GBP3 | guanylate binding protein 3 |
| 349565 | 0.26 | PNAT3 | nicotinamide nucleotide adenylyltransferase 3 |
| 389362 | 0.26 | RP11-506K6.3 | hypothetical LOC389362 |
| 87769 | 0.26 | RP11-151A6.2 | hypothetical protein BC004360 |
| 93100 | 0.26 | PP3856 | nicotinate phosphoribosyltransferase domain containing 1 |
| 23593 | 0.25 | SOUL | heme binding protein 2 |
| 26519 | 0.25 | TIMM10 | translocase of inner mitochondrial membrane 10 homolog (yeast) |
| 10438 | 0.24 | SUNCOR | nuclear DNA-binding protein |
| 318 | 0.24 | NUDT2 | nudix (nucleoside diphosphate linked moiety X)-type motif 2 |
| 3652 | 0.24 | IPP | intracisternal A particle-promoted polypeptide |
| 55871 | 0.24 | CBWD1 | COBW domain containing 1 |
| 81889 | 0.24 | YISKL | fumarylacetoacetate hydrolase domain containing 1 |
| 11118 | 0.23 | BTN3A2 | butyrophilin, subfamily 3, member A2 |
| 131076 | 0.23 | FLJ33273 | coiled-coil domain containing 58 |
| 25895 | 0.23 | FAM119B | family with sequence similarity 119, member B |
| 55228 | 0.23 | FLJ10781 | hypothetical protein FLJ10781 |
| 84930 | 0.23 | THC2 | microtubule associated serine/threonine kinase-like |
| 27068 | 0.22 | SID6-306 | pyrophosphatase (inorganic) 2 |
| 64858 | 0.22 | SNM1B | DNA cross-link repair 1B (PSO2 homolog, <i>S. cerevisiae</i>) |
| 152815 | 0.21 | THAP6 | THAP domain containing 6 |

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|--------|------|-----------|--|
| 3117 | 0.21 | HLA-DQA | major histocompatibility complex, class II, DQ alpha 1 |
| 400566 | 0.21 | LOC400566 | hypothetical gene supported by AK128660 |
| 51144 | 0.21 | KAR | hydroxysteroid (17-beta) dehydrogenase 12 |
| 54014 | 0.21 | WDR9 | bromodomain and WD repeat domain containing 1 |
| 6284 | 0.21 | S100A13 | S100 calcium binding protein A13 |
| 90273 | 0.21 | R29124_1 | carcinoembryonic antigen-related cell adhesion molecule 21 |
| 10781 | 0.20 | ZNF266 | zinc finger protein 266 |
| 126272 | 0.20 | FLJ38944 | EID-2-like inhibitor of differentiation-3 |
| 25885 | 0.20 | RPO1-4 | polymerase (RNA) I polypeptide A, 194kDa |
| 2944 | 0.20 | MU | glutathione S-transferase M1 |
| 4552 | 0.20 | MTRR | 5-methyltetrahydrofolate-homocysteine methyltransferase reductase |
| 51097 | 0.20 | SCCPDH | saccharopine dehydrogenase (putative) |
| 5434 | 0.20 | XAP4 | polymerase (RNA) II (DNA directed) polypeptide E, 25kDa |
| 6217 | 0.20 | RPS16 | ribosomal protein S16 |
| 8904 | 0.20 | MGC1142 | copine I |
| 10455 | 0.19 | PECI | peroxisomal D3,D2-enoyl-CoA isomerase |
| 145173 | 0.19 | Gal-T | beta 1,3-galactosyltransferase-like |
| 1512 | 0.19 | minichain | cathepsin H |
| 3700 | 0.19 | PK120 | inter-alpha (globulin) inhibitor H4 (plasma Kallikrein-sensitive glycoprotein) |
| 6168 | 0.19 | RPL37A | ribosomal protein L37a |
| 7390 | 0.19 | UROS | uroporphyrinogen III synthase (congenital erythropoietic porphyria) |
| 92106 | 0.19 | OXNAD1 | oxidoreductase NAD-binding domain containing 1 |
| 146279 | 0.18 | FLJ32871 | hypothetical protein FLJ32871 |
| 151963 | 0.18 | C3orf59 | chromosome 3 open reading frame 59 |
| 22927 | 0.18 | SERP1L | hyaluronan binding protein 4 |
| 283232 | 0.18 | TMEM80 | transmembrane protein 80 |
| 4605 | 0.18 | MYBL2 | v-myb myeloblastosis viral oncogene homolog (avian)-like 2 |
| 51657 | 0.18 | STYXL1 | serine/threonine/tyrosine interacting-like 1 |
| 57602 | 0.18 | USP36 | ubiquitin specific peptidase 36 |
| 63897 | 0.18 | FLJ22087 | amplified in breast cancer 1 |
| 79741 | 0.18 | FLJ13031 | chromosome 10 open reading frame 68 |
| 84328 | 0.18 | MGC15436 | leucine zipper and CTNNBIP1 domain containing |
| 84617 | 0.18 | TUBB6 | tubulin, beta 6 |
| 953 | 0.18 | NTPDase-1 | ectonucleoside triphosphate diphosphohydrolase 1 |
| 127255 | 0.17 | MGC22773 | leucine rich repeat containing 44 |