

Table S4. Lists of up-regulated carcinoma-specific zebrafish enriched genes in different human cancer data sets. The up-regulated HCC-specific zebrafish enriched genes were significantly enriched (FDR q-value ≤ 0.05 and FWER p-value ≤ 0.05) in human hepatocellular carcinoma (GSE6764), human pancreatic adenocarcinoma (GSE16515), human colorectal carcinoma (GSE4183) and human lung adenocarcinoma (GSE7670). GSEA identified the genes from this gene list which contributed maximally to the GSEA scores of corresponding human cancer transcriptomic profiles.

| Human cancer | No. | Gene Symbol | Gene Name |
|--|-----|-------------|---|
| Human hepatocellular carcinoma (GSE6764) | 1 | ABCC2 | ATP-binding cassette, sub-family C (CFTR/MRP), member 2 |
| | 2 | ABI1 | Abl-interactor 1 |
| | 3 | ADAM10 | ADAM metallopeptidase domain 10 |
| | 4 | AHR | Aryl hydrocarbon receptor |
| | 5 | AIP | Aryl hydrocarbon receptor interacting protein |
| | 6 | ALCAM | Activated leukocyte cell adhesion molecule |
| | 7 | ANGPT1 | Angiopoietin 1 |
| | 8 | ANXA11 | Annexin A11 |
| | 9 | AP3B1 | Adaptor-related protein complex 3, beta 1 subunit |
| | 10 | APOM | Apolipoprotein M |
| | 11 | ARHGEF2 | Rho/Rac guanine nucleotide exchange factor (GEF) 2 |
| | 12 | ARPC2 | Actin related protein 2/3 complex, subunit 2, 34kDa |
| | 13 | ARPC5 | Actin related protein 2/3 complex, subunit 5, 16kDa |
| | 14 | ARRB2 | Arrestin, beta 2 |
| | 15 | ASNS | Asparagine synthetase (glutamine-hydrolyzing) |
| | 16 | BAG2 | BCL2-associated athanogene 2 |
| | 17 | BCR | Breakpoint cluster region |
| | 18 | BIRC5 | Baculoviral IAP repeat-containing 5 |
| | 19 | BRD7 | Bromodomain containing 7 |
| | 20 | BSG | Basigin (Ok blood group) |
| | 21 | C1GALT1 | Core 1 synthase, glycoprotein-N-acetylgalactosamine 3-beta-galactosyltransferase, 1 |
| | 22 | CACNA1D | Calcium channel, voltage-dependent, L type, alpha 1D subunit |
| | 23 | CANX | Calnexin |
| | 24 | CAV1 | Caveolin 1, caveolae protein, 22kDa |
| | 25 | CBL | Cas-Br-M (murine) ecotropic retroviral transforming sequence |
| | 26 | CCL21 | Chemokine (C-C motif) ligand 21 |
| | 27 | CCNA2 | Cyclin A2 |
| | 28 | CCNE1 | Cyclin E1 |
| | 29 | CCT4 | Chaperonin containing TCP1, subunit 4 (delta) |

| | | |
|----|----------|---|
| 30 | CCT6A | Chaperonin containing TCP1, subunit 6A (zeta 1) |
| 31 | CCT7 | Chaperonin containing TCP1, subunit 7 (eta) |
| 32 | CD74 | CD74 molecule, major histocompatibility complex, class II invariant chain |
| 33 | CD9 | CD9 molecule |
| 34 | CDC2 | Cyclin-dependent kinase 1 |
| 35 | CDC20 | Cell division cycle 20 homolog (S. cerevisiae) |
| 36 | CDC27 | Cell division cycle 27 homolog (S. cerevisiae) |
| 37 | CDC42EP4 | CDC42 effector protein (Rho GTPase binding) 4 |
| 38 | CDC45L | Cell division cycle 45 homolog (S. cerevisiae) |
| 39 | CDIPT | CDP-diacylglycerol—inositol 3-phosphatidyltransferase |
| 40 | COL1A2 | Collagen, type XVIII, alpha 1 |
| 41 | CORO1C | Coronin, actin binding protein, 1C |
| 42 | CPNE3 | Copine III |
| 43 | CSNK2A1 | Casein kinase 2, alpha 1 polypeptide |
| 44 | CSNK2B | Casein kinase 2, beta polypeptide |
| 45 | CTNNB1 | Catenin (cadherin-associated protein), beta 1, 88kDa |
| 46 | CTSK | Cathepsin K |
| 47 | CXCR4 | Chemokine (C-X-C motif) receptor 4 |
| 48 | DBN1 | Drebrin 1 |
| 49 | DLG1 | Discs, large homolog 1 (Drosophila) |
| 50 | DNAJA1 | DnaJ (Hsp40) homolog, subfamily A, member 1 |
| 51 | DUSP2 | Dual specificity phosphatase 2 |
| 52 | ECT2 | Epithelial cell transforming sequence 2 oncogene |
| 53 | EIF4A2 | Eukaryotic translation initiation factor 4A2 |
| 54 | ENPP2 | Ectonucleotide pyrophosphatase/phosphodiesterase 2 |
| 55 | ERGIC3 | ERGIC and golgi 3 |
| 56 | EXT1 | Exostosin 1 |
| 57 | FBXO11 | F-box protein 11 |
| 58 | FLNC | Filamin C, gamma |
| 59 | FTH1 | Ferritin, heavy polypeptide 1 |
| 60 | GAD1 | Glutamate decarboxylase 1 (brain, 67kDa) |
| 61 | GBF1 | Golgi brefeldin A resistant guanine nucleotide exchange factor 1 |
| 62 | GPR34 | G protein-coupled receptor 34 |
| 63 | GRB2 | Growth factor receptor-bound protein 2 |
| 64 | HS6ST1 | Heparan sulfate 6-O-sulfotransferase 1 |
| 65 | HSP90AA1 | Heat shock protein 90kDa alpha (cytosolic), class A member 1 |
| 66 | HSPD1 | Heat shock 60kDa protein 1 (chaperonin) |
| 67 | IL15 | Interleukin 15 |
| 68 | KITLG | KIT ligand |
| 69 | KRT18 | Keratin 18 |
| 70 | LAMB1 | Laminin, beta 1 |
| 71 | LRPAP1 | Low density lipoprotein receptor-related protein associated protein 1 |
| 72 | MAPRE1 | Microtubule-associated protein, RP/EB family, member 1 |
| 73 | MCM4 | Minichromosome maintenance complex component 4 |
| 74 | MCM6 | Minichromosome maintenance complex component 6 |
| 75 | MCM7 | Minichromosome maintenance complex component 7 |
| 76 | MDM4 | Mdm4 p53 binding protein homolog (mouse) |
| 77 | MET | Met proto-oncogene (hepatocyte growth factor receptor) |
| 78 | MOBKL1A | MOB1, Mps One Binder kinase activator-like 1A (yeast) |

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|-----|----------|---|
| 79 | MR1 | Major histocompatibility complex, class I-related |
| 80 | MYH10 | Myosin, heavy chain 10, non-muscle |
| 81 | NCKIPSD | NCK interacting protein with SH3 domain |
| 82 | NPM1 | Nucleophosmin (nucleolar phosphoprotein B23, numatrin) |
| 83 | NUP107 | Nucleoporin 107kDa |
| 84 | PA2G4 | Proliferation-associated 2G4, 38kDa |
| 85 | PARVB | Parvin, beta |
| 86 | PIK3C2A | Phosphoinositide-3-kinase, class 2, alpha polypeptide |
| 87 | POP4 | Processing of precursor 4, ribonuclease P/MRP subunit (S. cerevisiae) |
| 88 | PPP1CB | Protein phosphatase 1, catalytic subunit, beta isozyme |
| 89 | RAB3GAP2 | RAB3 GTPase activating protein subunit 2 (non-catalytic) |
| 90 | RABIF | RAB interacting factor |
| 91 | RAC1 | Ras-related C3 botulinum toxin substrate 1 (rho family, small GTP binding protein Rac1) |
| 92 | RAC3 | Ras-related C3 botulinum toxin substrate 3 (rho family, small GTP binding protein Rac3) |
| 93 | RACGAP1 | Rac GTPase activating protein 1 |
| 94 | RCC1 | Regulator of chromosome condensation 1 |
| 95 | RELA | v-Rel reticuloendotheliosis viral oncogene homolog A (avian) |
| 96 | RHOA | Ras homolog gene family, member A |
| 97 | RHOT1 | Ras homolog gene family, member T1 |
| 98 | ROCK2 | Rho-associated, coiled-coil containing protein kinase 2 |
| 99 | RPL10A | Ribosomal protein L10a |
| 100 | RPL13 | Ribosomal protein L13 |
| 101 | RPL18 | Ribosomal protein L18 |
| 102 | RPL19 | Ribosomal protein L19 |
| 103 | RPL23A | Ribosomal protein L23a |
| 104 | RPL28 | Ribosomal protein L28 |
| 105 | RPL30 | Ribosomal protein L30 |
| 106 | RPL35 | Ribosomal protein L35 |
| 107 | RPL35A | Ribosomal protein L35a |
| 108 | RPL4 | Ribosomal protein L4 |
| 109 | RPL5 | Ribosomal protein L5 |
| 110 | RPL7 | Ribosomal protein L7 |
| 111 | RPL7A | Ribosomal protein L7a |
| 112 | RPL8 | Ribosomal protein L8 |
| 113 | RPL9 | Ribosomal protein L9 |
| 114 | RPS10 | Ribosomal protein S10 |
| 115 | RPS12 | Ribosomal protein S11 |
| 116 | RPS18 | Ribosomal protein S18 |
| 117 | RPS2 | Ribosomal protein S2 |
| 118 | RPS21 | Ribosomal protein S21 |
| 119 | RPS3 | Ribosomal protein S3 |
| 120 | RPS5 | Ribosomal protein S5 |
| 121 | RPS7 | Ribosomal protein S7 |
| 122 | RPS8 | Ribosomal protein S8 |
| 123 | RRM1 | Ribonucleotide reductase M1 |
| 124 | RUNX1 | Runt-related transcription factor 1 |
| 125 | S100A4 | S100 calcium binding protein A4 |
| 126 | SCIN | Scinderin |

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|--|---------|---|---|
| | | Solute carrier family 25 (mitochondrial carrier; phosphate carrier), member 3 | |
| 127 | SLC25A3 | | |
| 128 | SP1 | Sp1 transcription factor | |
| 129 | SSR2 | Signal sequence receptor, beta (translocon-associated protein beta) | |
| 130 | STAT5B | Signal transducer and activator of transcription 5B | |
| 131 | STMN1 | Stathmin 1 | |
| 132 | TBX2 | T-box 2 | |
| 133 | TCF7 | Transcription factor 7 (T-cell specific, HMG-box) | |
| 134 | TFDP1 | Transcription factor Dp-1 | |
| 135 | TGFB1 | Transforming growth factor, beta 1 | |
| 136 | TGFB2 | Transforming growth factor, beta 2 | |
| 137 | TIAL1 | TIA1 cytotoxic granule-associated RNA binding protein-like 1 | |
| 138 | TLN1 | Talin 1 | |
| 139 | TOM1 | Target of myb1 (chicken) | |
| 140 | TPR | Translocated promoter region (to activated MET oncogene) | |
| 141 | TRPA1 | Transient receptor potential cation channel, subfamily A, member 1 | |
| 142 | TTN | Titin | |
| 143 | TXNDC5 | Thioredoxin domain containing 5 (endoplasmic reticulum) | |
| 144 | UBE2D2 | Ubiquitin-conjugating enzyme E2D 2 (UBC4/5 homolog, yeast) | |
| 145 | UBE2H | Ubiquitin-conjugating enzyme E2H (UBC8 homolog, yeast) | |
| 146 | VANGL1 | Vang-like 1 (van gogh, <i>Drosophila</i>) | |
| 147 | VAPA | VAMP (vesicle-associated membrane protein)-associated protein A, 33kDa | |
| 148 | VAV3 | Vav 3 guanine nucleotide exchange factor | |
| 149 | VEGFC | Vascular endothelial growth factor C | |
| 150 | WNT4 | Wingless-type MMTV integration site family, member 4 | |
| <hr/> | | | |
| Human pancreatic adenocarcinoma (GSE16515) | 1 | ABI1 | Abl-interactor 1 |
| | 2 | ADAM10 | ADAM metallopeptidase domain 10 |
| | 3 | AHR | Aryl hydrocarbon receptor |
| | 4 | AIP | Aryl hydrocarbon receptor interacting protein |
| | 5 | ANXA11 | Annexin A11 |
| | 6 | ANXA4 | Annexin A4 |
| | 7 | ARHGEF2 | Rho/Rac guanine nucleotide exchange factor (GEF) 2 |
| | 8 | ARPC2 | Actin related protein 2/3 complex, subunit 2, 34kDa |
| | 9 | ARPC5 | Actin related protein 2/3 complex, subunit 5, 16kDa |
| | 10 | BCAR3 | Breast cancer anti-estrogen resistance 3 |
| | 11 | BCL2L1 | BCL2-like 1 |
| | 12 | BCR | Breakpoint cluster region |
| | 13 | BIRC2 | Baculoviral IAP repeat-containing 2 |
| | 14 | BIRC5 | Baculoviral IAP repeat-containing 5 |
| | 15 | BNIP3L | BCL2/adenovirus E1B 19kDa interacting protein 3-like |
| | 16 | BRD7 | Bromodomain containing 7 |
| | 17 | BSG | Basigin (Ok blood group) |
| | 18 | C1GALT1 | Core 1 synthase, glycoprotein-N-acetylgalactosamine 3-beta-galactosyltransferase, 1 |
| | 19 | CALM2 | Calmodulin 2 (phosphorylase kinase, delta) |
| | 20 | CARS | Cysteinyl-tRNA synthetase |
| | 21 | CBL | Cas-Br-M (murine) ecotropic retroviral transforming sequence |
| | 22 | CCNA2 | Cyclin A2 |
| | 23 | CCNE1 | Cyclin E1 |

| | | |
|----|----------|---|
| 24 | CCT6A | Chaperonin containing TCP1, subunit 6A (zeta 1) |
| 25 | CCT7 | Chaperonin containing TCP1, subunit 7 (eta) |
| 26 | CD74 | CD74 molecule, major histocompatibility complex, class II invariant chain |
| 27 | CD9 | CD9 molecule |
| 28 | CDC2 | Cyclin-dependent kinase 1 |
| 29 | CDC20 | Cell division cycle 20 homolog (S. cerevisiae) |
| 30 | CDC27 | Cell division cycle 27 homolog (S. cerevisiae) |
| 31 | CDC42 | Cell division cycle 42 (GTP binding protein, 25kDa) |
| 32 | CDC45L | Cell division cycle 45 homolog (S. cerevisiae) |
| 33 | CDH1 | Cadherin 1, type 1, E-cadherin (epithelial) |
| 34 | CHPT1 | Choline phosphotransferase 1 |
| 35 | CLOCK | Collagen, type I, alpha 2 |
| 36 | COL18A1 | Clock homolog (mouse) |
| 37 | COL1A2 | Collagen, type XVIII, alpha 1 |
| 38 | CORO1C | Coronin, actin binding protein, 1C |
| 39 | CSNK2A1 | Casein kinase 2, alpha 1 polypeptide |
| 40 | CSNK2B | Casein kinase 2, beta polypeptide |
| 41 | CTNNB1 | Catenin (cadherin-associated protein), beta 1, 88kDa |
| 42 | CTSK | Cathepsin K |
| 43 | CXCR4 | Chemokine (C-X-C motif) receptor 4 |
| 44 | DAD1 | Defender against cell death 1 |
| 45 | DBN1 | Drebrin 1 |
| 46 | DHCR7 | 7-Dehydrocholesterol reductase |
| 47 | DLG1 | Discs, large homolog 1 (Drosophila) |
| 48 | DNAJA1 | DnaJ (Hsp40) homolog, subfamily A, member 1 |
| 49 | DUSP2 | Dual specificity phosphatase 2 |
| 50 | ECT2 | Epithelial cell transforming sequence 2 oncogene |
| 51 | EFNB1 | Ephrin-B1 |
| 52 | EFNB2 | Ephrin-B2 |
| 53 | ETNK1 | Ethanolamine kinase 1 |
| 54 | EXT1 | Exostosin 1 |
| 55 | FGF18 | Fibroblast growth factor 18 |
| 56 | FLOT2 | Flotillin 2 |
| 57 | FPGS | Folylpolyglutamate synthase |
| 58 | FTH1 | Ferritin, heavy polypeptide 1 |
| 59 | GAD1 | Glutamate decarboxylase 1 (brain, 67kDa) |
| 60 | GCHFR | GTP cyclohydrolase I feedback regulator |
| 61 | GJB2 | Gap junction protein, beta 2, 26kDa |
| 62 | GRB2 | Growth factor receptor-bound protein 2 |
| 63 | GSK3B | Glycogen synthase kinase 3 beta |
| 64 | HP | Haptoglobin |
| 65 | HSP90AA1 | Heat shock protein 90kDa alpha (cytosolic), class A member 1 |
| 66 | HSPD1 | Heat shock 60kDa protein 1 (chaperonin) |
| 67 | HSPE1 | Heat shock 10kDa protein 1 (chaperonin 10) |
| 68 | ID1 | Inhibitor of DNA binding 1, dominant negative helix-loop-helix protein |
| 69 | IL15 | Interleukin 15 |
| 70 | KDELR2 | KDEL (Lys-Asp-Glu-Leu) endoplasmic reticulum protein retention receptor 2 |
| 71 | KITLG | KIT ligand |
| 72 | KRT18 | Keratin 18 |

| | | |
|-----|---------|---|
| 73 | LRP1 | Low density lipoprotein receptor-related protein 1 |
| 74 | MAPRE1 | Microtubule-associated protein, RP/EB family, member 1 |
| 75 | MCM4 | Minichromosome maintenance complex component 4 |
| 76 | MCM6 | Minichromosome maintenance complex component 6 |
| 77 | MCM7 | Minichromosome maintenance complex component 7 |
| 78 | MET | Met proto-oncogene (hepatocyte growth factor receptor) |
| 79 | MGAT4B | Mannosyl (alpha-1,3)-glycoprotein beta-1,4-N-acetylglucosaminyltransferase, isozyme B |
| 80 | NCKIPSD | NCK interacting protein with SH3 domain |
| 81 | NOG | Noggin |
| 82 | NUP107 | Nucleoporin 107kDa |
| 83 | PA2G4 | Proliferation-associated 2G4, 38kDa |
| 84 | PARVA | Parvin, alpha |
| 85 | PARVB | Parvin, beta |
| 86 | PDIA3 | Protein disulfide isomerase family A, member 3 |
| 87 | PFKL | Phosphofructokinase, liver |
| 88 | PICALM | Phosphatidylinositol binding clathrin assembly protein |
| 89 | PIM1 | Pim-1 oncogene |
| 90 | PMM2 | Phosphomannomutase 2 |
| 91 | POP4 | Processing of precursor 4, ribonuclease P/MRP subunit (<i>S. cerevisiae</i>) |
| 92 | PPP1R3C | Protein phosphatase 1, regulatory (inhibitor) subunit 3C |
| 93 | RAB14 | RAB14, member RAS oncogene family |
| 94 | RAB1A | RAB1A, member RAS oncogene family |
| 95 | RABIF | RAB interacting factor |
| 96 | RAC1 | Ras-related C3 botulinum toxin substrate 1 (rho family, small GTP binding protein Rac1) |
| 97 | RACGAP1 | Rac GTPase activating protein 1 |
| 98 | RCC1 | Regulator of chromosome condensation 1 |
| 99 | RELA | v-Rel reticuloendotheliosis viral oncogene homolog A (avian) |
| 100 | RHOA | Ras homolog gene family, member A |
| 101 | RND1 | Rho family GTPase 1 |
| 102 | RPL28 | Ribosomal protein L28 |
| 103 | RRM1 | Ribonucleotide reductase M1 |
| 104 | RUNX1 | Runt-related transcription factor 1 |
| 105 | S100A4 | S100 calcium binding protein A4 |
| 106 | SCIN | Scinderin |
| 107 | SHH | Sonic hedgehog |
| 108 | SMAD7 | SMAD family member 7 |
| 109 | SP1 | Sp1 transcription factor |
| 110 | SPRY4 | Sprouty homolog 4 (<i>Drosophila</i>) |
| 111 | TARS | Threonyl-tRNA synthetase |
| 112 | TCF7L2 | Transcription factor 7-like 2 (T-cell specific, HMG-box) |
| 113 | TFDP1 | Transcription factor Dp-1 |
| 114 | TGFB1 | Transforming growth factor, beta 1 |
| 115 | TGFB2 | Transforming growth factor, beta 2 |
| 116 | TIAL1 | TIA1 cytotoxic granule-associated RNA binding protein-like 1 |
| 117 | TLN1 | Talin 1 |
| 118 | TLR3 | Toll-like receptor 3 |
| 119 | TNIP1 | TNFAIP3 interacting protein 1 |
| 120 | TOM1 | Target of myb1 (chicken) |
| 121 | TPR | Translocated promoter region (to activated MET oncogene) |

| | | | |
|---|-----|---------|---|
| | 122 | TRPA1 | Transient receptor potential cation channel, subfamily A, member 1 |
| | 123 | UBE2H | Ubiquitin-conjugating enzyme E2H (UBC8 homolog, yeast) |
| | 124 | UBE2L3 | Ubiquitin-conjugating enzyme E2L 3 |
| | 125 | VANGL1 | Vang-like 1 (van gogh, Drosophila) |
| | 126 | VAPA | VAMP (vesicle-associated membrane protein)-associated protein A, 33kDa |
| | 127 | VEGFC | Vascular endothelial growth factor C |
| | | | |
| Human colorectal carcinoma (GSE4183) | 1 | ABCC2 | ATP-binding cassette, sub-family C (CFTR/MRP), member 2 |
| | 2 | ADAM10 | ADAM metallopeptidase domain 10 |
| | 3 | AGT | Angiotensinogen (serpin peptidase inhibitor, clade A, member 8) |
| | 4 | AHR | Aryl hydrocarbon receptor |
| | 5 | AKT2 | v-Akt murine thymoma viral oncogene homolog 2 |
| | 6 | ALCAM | Activated leukocyte cell adhesion molecule |
| | 7 | AP3B1 | Adaptor-related protein complex 3, beta 1 subunit |
| | 8 | ASNS | Asparagine synthetase (glutamine-hydrolyzing) |
| | 9 | BAG2 | BCL2-associated athanogene 2 |
| | 10 | BCL2L1 | BCL2-like 1 |
| | 11 | BCR | Breakpoint cluster region |
| | 12 | BIRC5 | Baculoviral IAP repeat-containing 5 |
| | 13 | BNIP3L | BCL2/adenovirus E1B 19kDa interacting protein 3-like |
| | 14 | BRD7 | Bromodomain containing 7 |
| | 15 | C1GALT1 | Core 1 synthase, glycoprotein-N-acetylgalactosamine 3-beta-galactosyltransferase, 1 |
| | 16 | CANX | Calnexin |
| | 17 | CARS | Cysteinyl-tRNA synthetase |
| | 18 | CAV1 | Caveolin 1, caveolae protein, 22kDa |
| | 19 | CBL | Cas-Br-M (murine) ecotropic retroviral transforming sequence |
| | 20 | CCNA2 | Cyclin A2 |
| | 21 | CCNE1 | Cyclin E1 |
| | 22 | CCT4 | Chaperonin containing TCP1, subunit 4 (delta) |
| | 23 | CCT6A | Chaperonin containing TCP1, subunit 6A (zeta 1) |
| | 24 | CCT7 | Chaperonin containing TCP1, subunit 7 (eta) |
| | 25 | CDC2 | Cyclin-dependent kinase 1 |
| | 26 | CDC20 | Cell division cycle 20 homolog (S. cerevisiae) |
| | 27 | CDC27 | Cell division cycle 27 homolog (S. cerevisiae) |
| | 28 | CDC45L | Cell division cycle 45 homolog (S. cerevisiae) |
| | 29 | CLEC11A | C-type lectin domain family 11, member A |
| | 30 | COL18A1 | Clock homolog (mouse) |
| | 31 | COL1A2 | Collagen, type XVIII, alpha 1 |
| | 32 | CORO1C | Coronin, actin binding protein, 1C |
| | 33 | CPNE3 | Copine III |
| | 34 | CSNK2B | Casein kinase 2, beta polypeptide |
| | 35 | CTNNB1 | Catenin (cadherin-associated protein), beta 1, 88kDa |
| | 36 | CTSK | Cathepsin K |
| | 37 | CXCR4 | Chemokine (C-X-C motif) receptor 4 |
| | 38 | DAD1 | Defender against cell death 1 |
| | 39 | DBN1 | Drebrin 1 |

| | | |
|----|---------|--|
| 40 | DHCR7 | 7-Dehydrocholesterol reductase |
| 41 | DNAJA1 | DnaJ (Hsp40) homolog, subfamily A, member 1 |
| 42 | DUSP1 | Dual specificity phosphatase 1 |
| 43 | DUSP2 | Dual specificity phosphatase 2 |
| 44 | ECT2 | Epithelial cell transforming sequence 2 oncogene |
| 45 | EDEM1 | ER degradation enhancer, mannosidase alpha-like 1 |
| 46 | EGR1 | Early growth response 1 |
| 47 | ENPP2 | Ectonucleotide pyrophosphatase/phosphodiesterase 2 |
| 48 | ERGIC3 | ERGIC and golgi 3 |
| 49 | FADS2 | Fatty acid desaturase 2 |
| 50 | FGFR1 | Fibroblast growth factor receptor 1 |
| 51 | FLI1 | Friend leukemia virus integration 1 |
| 52 | FLNC | Filamin C, gamma |
| 53 | FLT1 | Fms-related tyrosine kinase 1 (vascular endothelial growth factor/vascular permeability factor receptor) |
| 54 | FPGS | Folylpolyglutamate synthase |
| 55 | GAD1 | Glutamate decarboxylase 1 (brain, 67kDa) |
| 56 | GADD45B | Growth arrest and DNA-damage-inducible, beta |
| 57 | GALNT2 | UDP-N-acetyl-alpha-D-galactosamine:polypeptide N-acetylgalactosaminyltransferase 2 (GalNAc-T2) |
| 58 | GCHFR | GTP cyclohydrolase I feedback regulator |
| 59 | GPD1 | Glycerol-3-phosphate dehydrogenase 1 (soluble) |
| 60 | GSK3B | Glycogen synthase kinase 3 beta |
| 61 | HSPD1 | Heat shock 60kDa protein 1 (chaperonin) |
| 62 | HSPE1 | Heat shock 10kDa protein 1 (chaperonin 10) |
| 63 | INHBB | Inhibin, beta B |
| 64 | JAK1 | Janus kinase 1 |
| 65 | JUN | Jun proto-oncogene |
| 66 | KDELR2 | KDEL (Lys-Asp-Glu-Leu) endoplasmic reticulum protein retention receptor 2 |
| 67 | LAMB1 | Laminin, beta 1 |
| 68 | LRPAP1 | Low density lipoprotein receptor-related protein associated protein 1 |
| 69 | MAPRE1 | Microtubule-associated protein, RP/EB family, member 1 |
| 70 | MCM4 | Minichromosome maintenance complex component 4 |
| 71 | MCM6 | Minichromosome maintenance complex component 6 |
| 72 | MCM7 | Minichromosome maintenance complex component 7 |
| 73 | MET | Met proto-oncogene (hepatocyte growth factor receptor) |
| 74 | MYH10 | Myosin, heavy chain 10, non-muscle |
| 75 | NODAL | Nodal homolog (mouse) |
| 76 | NUP107 | Nucleoporin 107kDa |
| 77 | PA2G4 | Proliferation-associated 2G4, 38kDa |
| 78 | PAH | Phenylalanine hydroxylase |
| 79 | PARVA | Parvin, alpha |
| 80 | PARVB | Parvin, beta |
| 81 | PDIA3 | Protein disulfide isomerase family A, member 3 |
| 82 | PIK3C2A | Phosphoinositide-3-kinase, class 2, alpha polypeptide |
| 83 | PIM1 | Pim-1 oncogene |
| 84 | PMM2 | Phosphomannomutase 2 |
| 85 | POP4 | Processing of precursor 4, ribonuclease P/MRP subunit (<i>S. cerevisiae</i>) |
| 86 | PROX1 | Prospero homeobox 1 |

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|-------|----------|---|
| 87 | RAC3 | Ras-related C3 botulinum toxin substrate 3 (rho family, small GTP binding protein Rac3) |
| 88 | RACGAP1 | Rac GTPase activating protein 1 |
| 89 | RCC1 | Regulator of chromosome condensation 1 |
| 90 | RDX | Radixin |
| 91 | RHOA | Ras homolog gene family, member A |
| 92 | RND1 | Rho family GTPase 1 |
| 93 | ROCK2 | Rho-associated, coiled-coil containing protein kinase 2 |
| 94 | RPL35A | Ribosomal protein L35a |
| 95 | RRM1 | Ribonucleotide reductase M1 |
| 96 | RTN4RL2 | Reticulon 4 receptor-like 2 |
| 97 | RUNX1 | Runt-related transcription factor 1 |
| 98 | S100A4 | S100 calcium binding protein A4 |
| 99 | SERPIND1 | Serpin peptidase inhibitor, clade D (heparin cofactor), member 1 |
| 100 | SHH | Sonic hedgehog |
| 101 | SLC8A1 | Solute carrier family 8 (sodium/calcium exchanger), member 1 |
| 102 | SSR2 | Signal sequence receptor, beta (translocon-associated protein beta) |
| 103 | STAT3 | Signal transducer and activator of transcription 3 (acute-phase response factor) |
| 104 | TARS | Threonyl-tRNA synthetase |
| 105 | TCF7 | Transcription factor 7 (T-cell specific, HMG-box) |
| 106 | TFDP1 | Transcription factor Dp-1 |
| 107 | TGFB1 | Transforming growth factor, beta 1 |
| 108 | TGFB2 | Transforming growth factor, beta 2 |
| 109 | TGFB3 | Transforming growth factor, beta 3 |
| 110 | TGFBR2 | Transforming growth factor, beta receptor II (70/80kDa) |
| 111 | TLN1 | Talin 1 |
| 112 | TRPA1 | Transient receptor potential cation channel, subfamily A, member 1 |
| 113 | TXNDC5 | Thioredoxin domain containing 5 (endoplasmic reticulum) |
| 114 | VANGL1 | Vang-like 1 (van gogh, <i>Drosophila</i>) |
| 115 | VEGFC | Vascular endothelial growth factor C |
| 116 | VTN | Vitronectin |
| 117 | WNT4 | Wingless-type MMTV integration site family, member 4 |
| 118 | WWOX | WW domain containing oxidoreductase |
| <hr/> | | |
| 1 | ABCC2 | ATP-binding cassette, sub-family C (CFTR/MRP), member 2 |
| 2 | AGT | Angiotensinogen (serpin peptidase inhibitor, clade A, member 8) |
| 3 | AHR | Aryl hydrocarbon receptor |
| 4 | ASNS | Asparagine synthetase (glutamine-hydrolyzing) |
| 5 | BIRC5 | Baculoviral IAP repeat-containing 5 |
| 6 | C1GALT1 | Core 1 synthase, glycoprotein-N-acetylgalactosamine 3-beta-galactosyltransferase, 1 |
| 7 | CANX | Calnexin |
| 8 | CCNA2 | Cyclin A2 |
| 9 | CCNE1 | Cyclin E1 |
| 10 | CCT6A | Chaperonin containing TCP1, subunit 6A (zeta 1) |
| 11 | CDC2 | Cyclin-dependent kinase 1 |
| 12 | CDC20 | Cell division cycle 20 homolog (<i>S. cerevisiae</i>) |
| 13 | CDC45L | Cell division cycle 45 homolog (<i>S. cerevisiae</i>) |
| 14 | CDH1 | Cadherin 1, type 1, E-cadherin (epithelial) |
| 15 | COL18A1 | Clock homolog (mouse) |

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| 16 | COL1A2 | Collagen, type XVIII, alpha 1 |
| 17 | CTSK | Cathepsin K |
| 18 | ECT2 | Epithelial cell transforming sequence 2 oncogene |
| 19 | ERGIC3 | ERGIC and golgi 3 |
| 20 | FPGS | Folylpolyglutamate synthase |
| 21 | GAD1 | Glutamate decarboxylase 1 (brain, 67kDa) |
| 22 | GALNT2 | UDP-N-acetyl-alpha-D-galactosamine:polypeptide N-acetylgalactosaminyltransferase 2 (GalNAc-T2) |
| 23 | GCG | Glucagon |
| 24 | GSTZ1 | Glutathione transferase zeta 1 |
| 25 | HP | Haptoglobin |
| 26 | HSPD1 | Heat shock 60kDa protein 1 (chaperonin) |
| 27 | HSPE1 | Heat shock 10kDa protein 1 (chaperonin 10) |
| 28 | INHBB | Inhibin, beta B |
| 29 | KDELR2 | KDEL (Lys-Asp-Glu-Leu) endoplasmic reticulum protein retention receptor 2 |
| 30 | KRT18 | Keratin 18 |
| 31 | MCM4 | Minichromosome maintenance complex component 4 |
| 32 | MCM6 | Minichromosome maintenance complex component 6 |
| 33 | MET | Met proto-oncogene (hepatocyte growth factor receptor) |
| 34 | MGAT4B | Mannosyl (alpha-1,3)-glycoprotein beta-1,4-N-acetylglucosaminyltransferase, isozyme B |
| 35 | PAX3 | Paired box 3 |
| 36 | PDIA3 | Protein disulfide isomerase family A, member 3 |
| 37 | PMM2 | Phosphomannomutase 2 |
| 38 | RACGAP1 | Rac GTPase activating protein 1 |
| 39 | RUNX1 | Runt-related transcription factor 1 |
| 40 | SERPIND1 | Serpin peptidase inhibitor, clade D (heparin cofactor), member 1 |
| 41 | SSR2 | Signal sequence receptor, beta (translocon-associated protein beta) |
| 42 | TARS | Threonyl-tRNA synthetase |
| 43 | TFDP1 | Transcription factor Dp-1 |
| 44 | TSPAN31 | Tetraspanin 31 |
| 45 | TXNDC5 | Thioredoxin domain containing 5 (endoplasmic reticulum) |
| 46 | UBE2H | Ubiquitin-conjugating enzyme E2H (UBC8 homolog, yeast) |
| 47 | WNT4 | Wingless-type MMTV integration site family, member 4 |