© CSIRO 2006 10.1071/RD06015_AC

ISSN 1031-3613

*Reprod. Fertil. Dev.* 2006, **18**(6), 635–645.

## Accessory Publications

# Transcription profile during maternal to zygotic transition in the mouse embryo

*Xing-Yu Li*[A], *Xiang-Shun Cui*[A,B] *and Nam-Hyung Kim*[A,C]

[A]Department of Animal Science, Chungbuk National University, Cheongju, Chungbuk 361-763, Korea.

[B]Jilin Agricultural University, Changchun City, Jilin Province, China.

[C]Corresponding author. Email: nhkim@chungbuk.ac.kr

**Supplementary Table 1. Nucleoside, nucleotide and nucleic acid metabolism-related genes**

| RefSeq NM | Gene symbol | Gene name | *P*-value | Fold (1C/2C) |
|---|---|---|---|---|
| NM_011550.2 | *Tcfl4* | Transcription factor-like 4 | 0.0014 | 84.1 |
| NM_011809.2 | *Ets2* | E26 avian leukemia oncogene 2, 3′ domain | 0.0031 | 37.7 |
| NM_133761.2 | *Mitc1* | MAD homolog 4 interacting transcription coactivator 1 | 0.0010 | 29.9 |
| NM_007840.1 | *Ddx5* | DEAD (Asp-Glu-Ala-Asp) box polypeptide 5 | 0.0027 | 27.5 |
| NM_172896.1 | *E330028A19Rik* | RIKEN cDNA E330028A19 gene | 0.0040 | 26.4 |
| AK011711.1 | *Xrn2* | 5′-3′ Exoribonuclease 2 | 0.0009 | 24.2 |
| BC055003.1 | *Shprh* | SNF2 histone linker PHD RING helicase | 0.0030 | 22.5 |
| NM_013764.1 | *Dguok* | Deoxyguanosine kinase | 0.0031 | 22.2 |
| NM_176953.2 | *Lig4* | Ligase IV, DNA, ATP-dependent | 0.0006 | 19.8 |
| NM_011378.1 | *Sin3a* | Transcriptional regulator, SIN3A (yeast) | 0.0013 | 19.5 |
| NM_144934.2 | *Mbd3l2* | Methyl-CpG binding domain protein 3-like 2 | 0.0046 | 18.7 |
| BC002192.1 | *Yaf2* | YY1 associated factor 2 | 0.0002 | 18.7 |
| AK050880.1 | *2810439M05Rik* | RIKEN cDNA 2810439M05 gene | 0.0013 | 18.4 |
| NM_183167.1 | *AI987944* | Expressed sequence AI987944 | 0.0017 | 16.5 |
| NM_181267.2 | *Zfp120* | Zinc finger protein 120 | 0.0007 | 15.9 |
| NM_025273.1 | *Pcbd* | 6-Pyruvoyl-tetrahydropterin synthase/dimerisation cofactor of hepatocyte nuclear factor 1 alpha (TCF1) | 0.0020 | 15.5 |
| AK122236.1 | Uncharacterised | Musculus mRNA for mKIAA0284 protein | 0.0013 | 14.6 |
| BC035550.1 | Uncharacterised | Adenylate cyclase 5 | 0.0010 | 14.4 |

| | | | | |
|---|---|---|---|---|
| BC061256.1 | Uncharacterised | Musculus RNA pseudouridylate synthase domain containing 4 | 0.0005 | 13.8 |
| NM_053124.2 | *Smarca5* | SWI/SNF related, matrix associated, actin dependent regulator of chromatin, subfamily a, member 5 | 0.0016 | 13.2 |
| NM_022309.2 | *Cbfb* | Core binding factor beta | 0.0025 | 12.1 |
| AK012409.1 | Uncharacterised | *Mus musculus* 11 days embryo whole body cDNA, RIKEN full-length enriched library, clone: 2700050F09; product: hypothetical protein | 0.0016 | 10.2 |
| NM_027397.1 | *Isl2* | Insulin related protein 2 (islet 2) | 0.0024 | 9.9 |
| NM_009366.2 | *Tgfb1i4* | Transforming growth factor beta 1 induced transcript 4 | 0.0023 | 9.6 |
| NM_026189.2 | *2310005P05Rik* | RIKEN cDNA 2310005P05 gene | 0.0007 | 9.1 |
| NM_016748.1 | *Ctps* | Cytidine 5′-triphosphate synthase | 0.0015 | 8.0 |
| NM_026653.1 | *Rpa1* | Replication protein A1 | 0.0031 | 7.7 |
| BC066020.1 | *Zfp69* | Zinc finger protein 69 | 0.0037 | 7.3 |
| NM_018791.1 | *Zfp108* | Zinc finger protein 108 | 0.0030 | 6.1 |
| NM_026765.2 | *Urkl1* | Uridine kinase-like 1 | 0.0042 | 5.8 |
| NM_009483.1 | *Utx* | Ubiquitously transcribed tetratricopeptide repeat gene, X chromosome | 0.0039 | 5.6 |
| NM_007971.1 | *Ezh2* | Enhancer of zeste homolog 2 (*Drosophila*) | 0.0020 | 4.8 |
| NM_020625.2 | *Zfp297* | Zinc finger protein 297 | 0.0034 | 3.6 |
| NM_013699.1 | *Ubp1* | Upstream binding protein 1 | 0.0035 | 3.5 |
| BC038178.1 | Uncharacterised | cDNA sequence BC038178 | 0.0047 | 2.7 |
| NM_025901.2 | *1500004O14Rik* | RIKEN cDNA 1500004O14 gene | 0.0043 | −5.3 |
| AK030850.1 | Uncharacterised | Adult male thymus cDNA, RIKEN full-length enriched library | 0.0011 | −5.4 |
| NM_197982.2 | *Ddx39* | DEAD (Asp-Glu-Ala-Asp) box polypeptide 39 | 0.0039 | −6.4 |
| NM_138669.1 | *Ddx48* | DEAD (Asp-Glu-Ala-Asp) box polypeptide 48 | 0.0024 | −6.8 |
| NM_152810.1 | *Cdc5l* | Cell division cycle 5-like (*S. pombe*) | 0.0017 | −8.1 |
| NM_181730.2 | *Rpo1-3* | RNA polymerase 1-3 | 0.0028 | −9.7 |
| NM_007516.1 | *Hnrpd* | Heterogeneous nuclear ribonucleoprotein D | 0.0013 | −10.4 |
| NM_007948.1 | *Ercc1* | Excision repair cross-complementing rodent repair deficiency, complementation group 1 | 0.0049 | −12.7 |
| NM_175171.2 | *4930420O11Rik* | RIKEN cDNA 4930420O11 gene | 0.0033 | −14.4 |
| NM_009537.2 | *Yy1* | YY1 transcription factor | 0.0027 | −15.1 |
| BC028539.1 | *H2afv* | H2A histone family, member V | 0.0015 | −15.8 |
| NM_008921.1 | *Prim1* | DNA primase, p49 subunit | 0.0022 | −17.9 |
| NM_008053.1 | *Fxr1h* | Fragile X mental retardation gene 1, autosomal homolog | 0.0001 | −18.5 |
| NM_153096.1 | *Zfp353* | Zinc finger protein 353 | 0.0036 | −19.6 |
| NM_178183.1 | *Hist1h2ak* | Histone 1, H2ak | 0.0035 | −20.0 |
| NM_153798.1 | *Polr2b* | Polymerase (RNA) II (DNA directed) polypeptide B | 0.0012 | −21.7 |
| NM_016750.1 | *H2afz* | H2A histone family, member Z | 0.0039 | −23.1 |

| | | | | |
|---|---|---|---|---|
| NM_027156.2 | *2310061O04Rik* | RIKEN cDNA 2310061O04 gene | 0.0002 | −26.1 |
| AK017490.1 | *Mphosph10* | M-phase phosphoprotein 10 (U3 small nucleolar ribonucleoprotein) | 0.0049 | −26.3 |
| NM_011509.1 | *Supt4h2;Supt4h* | Suppressor of Ty 4 homolog 2 (*S. cerevisiae*); suppressor of Ty 4 homolog (*S. cerevisiae*) | 0.0023 | −27.1 |
| NM_026924.2 | *Zfp339* | Zinc finger protein 339 | 0.0021 | −27.9 |
| BC037681.1 | *Polr2e* | Polymerase (RNA) II (DNA directed) polypeptide E, | 0.0025 | −31.1 |
| NM_009225.1 | *Snrpb* | Small nuclear ribonucleoprotein B | 0.0017 | −34.9 |
| NM_023162.3 | *Znrd1* | Zinc ribbon domain containing, 1 | 0.0038 | −46.7 |
| NM_011842.2 | *Mta2* | Metastasis-associated gene family, member 2 | 0.0048 | −48.6 |
| NM_011663.1 | *U2af1-rs1* | U2 small nuclear ribonucleoprotein auxiliary factor 1, related sequence 1 | 0.0010 | −53.9 |
| BC046393.1 | *Zfp217* | Zinc finger protein 217 | 0.0041 | −61.3 |
| NM_028218.1 | *2210409E12Rik* | RIKEN cDNA 2210409E12 gene | 0.0012 | −62.3 |
| NM_178643.3 | *C230052I12Rik* | RIKEN cDNA C230052I12 gene | 0.0016 | −102.0 |
| NM_207211.1 | *AA673488* | Musculus expressed sequence AA673488 | 0.0016 | −124.9 |
| NM_026106.3 | *Dr1* | Down-regulator of transcription 1 | 0.0006 | −128.6 |
| NM_030724.1 | *AA407809* | Expressed sequence AA407809 | 0.0002 | −136.1 |
| NM_178184.1 | *Hist1h2an* | Histone 1, H2an | 0.0043 | −169.4 |
| NM_148928.1 | *Gtf3c5* | General transcription factor IIIC, polypeptide 5 | 0.0037 | −198.9 |
| NM_021463.2 | *Prps1* | Phosphoribosyl pyrophosphate synthetase 1 | 0.0001 | −474.9 |
| NM_019547.1 | *Rnpc1* | RNA-binding region (RNP1, RRM) containing 1 | 0.0035 | 19.4 |
| NM_152229.1 | *Nr2e1* | Nuclear receptor subfamily 2, group E, member 1 | 0.0044 | 11.2 |
| NM_013705.1 | *Zfp30* | Zinc finger protein 30 | 0.0040 | 9.2 |
| NM_175136.1 | *1110063C11Rik* | RIKEN cDNA 1110063C11 gene | 0.0038 | 6.3 |
| NM_026106.3 | *Dr1* | Down-regulator of transcription 1 | 0.0033 | 6.1 |
| NM_016683.1 | *Zfp95* | Zinc finger protein 95 | 0.0045 | 3.5 |
| NM_011490.1 | *Stau1* | Staufen (RNA binding protein) homolog 1 (*Drosophila*) | 0.0036 | 3.1 |
| NM_027332.1 | *2310066N05Rik* | RIKEN cDNA 2310066N05 gene | 0.0045 | 2.7 |
| NM_011742.1 | *Zfp1* | Zinc finger protein 1 | 0.0047 | 2.3 |
| NM_053124.2 | *Smarca5* | SWI/SNF related, matrix associated, actin dependent regulator of chromatin, subfamily a, member 5 | 0.0044 | −2.7 |
| NM_177684.2 | *LOC232337* | Hypothetical protein LOC232337 | 0.0045 | −2.9 |
| NM_008704.2 | *Nme1* | Expressed in non-metastatic cells 1, protein | 0.0033 | −11.8 |

**Supplementary Table 2. Protein metabolism and modification-related genes**

| RefSeq NM | Gene symbol | Gene name | *P*-value | Fold (1C/2C) |
|---|---|---|---|---|
| NM_011046.1 | *Furin* | Furin (paired basic amino acid cleaving enzyme) | 0.0015 | 159.0 |
| NM_007395.1 | *Acvr1b* | Activin A receptor, type 1B | 0.0023 | 98.5 |
| NM_009255.2 | *Serpine2* | Serine (or cysteine) proteinase inhibitor, clade E, member 2 | 0.0024 | 79.3 |
| NM_198306.1 | *Galnt9* | UDP-*N*-acetyl-alpha-D-galactosamine:polypeptide *N*-acetylgalactosaminyltransferase 9 | 0.0034 | 48.1 |
| NM_008881.1 | *Plxna1* | Plexin A1 | 0.0006 | 33.5 |
| BC052504.1 | *Ptplb* | Protein tyrosine phosphatase-like (proline instead of catalytic arginine), member b | 0.0036 | 25.7 |
| NM_013814.2 | *Galnt1* | UDP-*N*-acetyl-alpha-D-galactosamine:polypeptide *N*-acetylgalactosaminyltransferase 1 | 0.0004 | 25.7 |
| NM_172845.1 | *Adamts4* | A disintegrin-like and metalloprotease (reprolysin type) with thrombospondin type 1 motif, 4 | 0.0035 | 22.6 |
| AK007980.1 | Uncharacterised | 10-day-old male pancreas cDNA | 0.0030 | 19.4 |
| AK040199.1 | *Fyn* | Fyn proto-oncogene | 0.0049 | 18.5 |
| NM_010160.1 | *Cugbp2* | CUG triplet repeat,RNA binding protein 2 | 0.0020 | 17.8 |
| NM_008179.1 | *Gspt2* | G1 to phase transition 2 | 0.0029 | 14.6 |
| AK129255.1 | Uncharacterised | mKIAA0990 protein | 0.0018 | 8.0 |
| NM_009481.1 | *Usp9x* | Ubiquitin specific protease 9, X chromosome | 0.0015 | 6.8 |
| NM_145465.1 | *Stk24* | Serine/threonine kinase 24 (STE20 homolog, yeast) | 0.0014 | 6.0 |
| NM_009071.1 | *Rock1* | Rho-associated coiled-coil forming kinase 1 | 0.0016 | 5.6 |
| NM_026352.2 | *Ppid* | Peptidylprolyl isomerase D (cyclophilin D) | 0.0015 | 4.4 |
| AK012109.1 | Uncharacterised | 10 days embryo whole body cDNA | 0.0010 | 4.1 |
| NM_016737.1 | *Stip1* | Stress-induced phosphoprotein 1 | 0.0037 | −3.5 |
| NM_027807.1 | *Cul5* | Cullin 5 | 0.0012 | −4.7 |
| NM_172086.1 | *Rpl32* | Ribosomal protein L32 | 0.0023 | −5.3 |
| NM_008683.1 | *Nedd8* | Neural precursor cell expressed, developmentally downregulated gene 8 | 0.0028 | −5.4 |
| NM_019639.2 | *Ubc* | Ubiquitin C | 0.0006 | −5.6 |
| NM_007637.1 | *Cct5* | Chaperonin subunit 5 (epsilon) | 0.0003 | −6.2 |
| U69107.1 | *ARK2* | Aurora-related kinase 2 | 0.0009 | −6.8 |
| NM_009083.2 | *Rpl30* | Ribosomal protein L30 | 0.0018 | −7.9 |
| NM_024258.1 | *Usp16* | Ubiquitin specific protease 16 | 0.0037 | −9.0 |
| NM_025936.1 | *Rars* | Arginyl-tRNA synthetase | 0.0040 | −10.5 |
| NM_009079.2 | *Rpl22* | Ribosomal protein L22 | 0.0011 | −10.9 |
| NM_007636.1 | *Cct2* | Chaperonin subunit 2 (beta) | 0.0007 | −11.1 |

| | | | | |
|---|---|---|---|---|
| NM_009081.1 | *Rpl28* | Ribosomal protein L28 | 0.0047 | −11.3 |
| NM_008907.1 | *Ppia* | Peptidylprolyl isomerase A | 0.0007 | −11.8 |
| NM_025919.1 | *Rpl11* | Ribosomal protein L11 | 0.0011 | −12.0 |
| NM_030685.1 | *D3Ucla1* | DNA segment, Chr 3, University of California at Los Angeles 1 | 0.0004 | −12.3 |
| NM_013902.2 | *Fkbp3* | FK506 binding protein 3 | 0.0025 | −12.7 |
| NM_053257.1 | *Rpl31* | Ribosomal protein L31 | 0.0006 | −13.2 |
| NM_009836.1 | *Cct3* | Chaperonin subunit 3 (gamma) | 0.0010 | −15.1 |
| NM_009092.2 | *Rps17* | Ribosomal protein S17 | 0.0039 | −15.8 |
| NM_018730.1 | *Rpl36* | Ribosomal protein L36 | 0.0002 | −17.0 |
| NM_011296.1 | *Rps18* | Ribosomal protein S18 | 0.0007 | −17.1 |
| NM_009083.2 | *Rpl30* | Ribosomal protein L30 | 0.0012 | −17.7 |
| AL732599.5_CDS_2 | Uncharacterised | DNA sequence from clone RP24-312B5 on chromosome 4 Contains the 5' end of the Tnfsf8 gene for tumor necrosis factor (ligand) superfamily member 8 and a ribosomal protein L17 (Rpl17) pseudogene | 0.0012 | –18.4 |
| NM_011031.1 | *P4ha2* | Procollagen-proline, 2-oxoglutarate 4-dioxygenase (proline 4-hydroxylase), alpha II polypeptide | 0.0018 | −19.1 |
| NM_008945.1 | *Psmb4* | Proteasome (prosome, macropain) subunit, beta type 4 | 0.0045 | −19.5 |
| NM_009077.1 | *Rpl18* | Ribosomal protein L18 | 0.0046 | −19.7 |
| NM_009093.1 | *Rps29* | Ribosomal protein S29 | 0.0012 | −20.0 |
| NM_019865.2 | *Rpl36a* | Ribosomal protein L36a | 0.0017 | −20.7 |
| NM_023372.1 | *Rpl38* | Ribosomal protein L38 | 0.0010 | −21.0 |
| NM_080635.1 | *Eif3s3* | Eukaryotic translation initiation factor 3, subunit 3 (gamma) | 0.0003 | −22.2 |
| NM_019865.2 | *Rpl36a* | Ribosomal protein L36a | 0.0039 | −23.3 |
| NM_011188.1 | *Psmc2* | Proteasome (prosome, macropain) 26S subunit, ATPase 2 | 0.0004 | −24.2 |
| NM_207635.1 | *Rps24* | Ribosomal protein S24 | 0.0016 | −24.6 |
| NM_026055.1 | *Rpl39* | Ribosomal protein L39 | 0.0015 | −26.4 |
| NM_009098.2 | *Rps8* | Ribosomal protein S8 | 0.0002 | −27.0 |
| NM_133807.1 | *AA959742* | Expressed sequence AA959742 | 0.0007 | −27.2 |
| BC054424.1 | *Rpl17* | Ribosomal protein L17 | 0.0037 | −28.0 |
| NM_139059.1 | *Csnk1d* | Casein kinase 1, delta | 0.0036 | −29.0 |
| NM_145508.1 | *Dyrk3* | Dual-specificity tyrosine-(Y)-phosphorylation regulated kinase 3 | 0.0006 | −29.1 |
| NM_019442.2 | *Stk19* | Serine/threonine kinase 19 | 0.0047 | −30.1 |
| NM_025344.1 | *Eif3s5* | Eukaryotic translation initiation factor 3, subunit 5 (epsilon) | 0.0032 | −30.5 |
| NM_011975.2 | *Rpl27a* | Ribosomal protein L27a | 0.0005 | −31.6 |
| NM_013725.2 | *Rps11* | Ribosomal protein S11 | 0.0006 | −34.3 |
| BC052145.1 | Uncharacterised | Similar to ribosomal protein 10 | 0.0047 | −34.3 |

| | | | | |
|---|---|---|---|---|
| NM_026533.1 | *Rps13* | Ribosomal protein S13 | 0.0010 | −35.5 |
| NM_009838.1 | *Cct6a* | Chaperonin subunit 6a (zeta) | 0.0005 | −37.5 |
| U28917.1 | *Rpl13* | Ribosomal protein L13 | 0.0012 | −39.8 |
| NM_025425.1 | *Rpl3l* | Ribosomal protein L3-like | 0.0035 | −45.6 |
| NM_009982.2 | *Ctsc* | Cathepsin C | 0.0020 | −48.3 |
| NM_019647.3 | *Rpl21* | Ribosomal protein L21 | 0.0042 | −52.6 |
| NM_011296.1 | *Rps18* | Ribosomal protein S18 | 0.0027 | 54.1 |
| NM_009096.1 | *Rps6* | Ribosomal protein S6 | 0.0008 | −55.5 |
| NM_144547.1 | *Amhr2* | Anti-Mullerian hormone type 2 receptor | 0.0031 | −55.6 |
| NM_016876.2 | *Eif3s4* | Eukaryotic translation initiation factor 3, subunit 4 (delta) | 0.0007 | −56.9 |
| BC006656.1 | *Ctsb* | Cathepsin B | 0.0007 | −61.8 |
| NM_033561.1 | *Wbscr1* | Williams–Beuren syndrome chromosome region 1 homolog (human) | 0.0037 | −74.9 |
| NM_011291.2 | *Rpl7* | Ribosomal protein L7 | 0.0007 | −79.5 |
| NM_009080.1 | *Rpl26* | Ribosomal protein L26 | 0.0015 | −82.2 |
| NM_024266.2 | *Rps25* | Ribosomal protein S25 | 0.0019 | −83.8 |
| NM_023133.1 | *Rps19* | Ribosomal protein S19 | 0.0012 | −90.5 |
| AK014594.1 | *Rps20* | Ribosomal protein S20 | 0.0021 | −94.7 |
| NM_009091.1 | *Rps15* | Ribosomal protein S15 | 0.0031 | −96.7 |
| NM_019883.1 | *Uba52* | Ubiquitin A-52 residue ribosomal protein fusion product 1 | 0.0013 | −114.8 |
| NM_013765.1 | *Rps26* | Ribosomal protein S26 | 0.0005 | −145.7 |
| NM_027015.1 | *Rps27* | Ribosomal protein S27 | 0.0007 | −146.0 |
| NM_178891.3 | *AW124876* | Expressed sequence AW124876 | 0.0023 | −244.3 |
| NM_009076.1 | *Rpl12* | Ribosomal protein L12 | 0.0011 | −272.4 |
| BC052661.1 | Uncharacterised | Carboxypeptidase A1 | 0.0040 | 7.0 |
| NM_011200.1 | *Ptp4a1* | Protein tyrosine phosphatase 4a1 | 0.0039 | 6.3 |
| NM_153459.1 | *Dusp7* | Dual specificity phosphatase 7 | 0.0033 | 4.1 |
| NM_025425.1 | *Rpl3l* | Ribosomal protein L3-like | 0.0040 | 2.9 |
| AK077136.1 | *Ppm1b* | Protein phosphatase 1B, magnesium dependent, beta isoform | 0.0044 | 2.2 |
| U28917.1 | *Rpl13* | Ribosomal protein L13 | 0.0035 | −1.9 |
| NM_009093.1 | *Rps29* | Ribosomal protein S29 | 0.0045 | −2.2 |
| NM_028279.1 | *Naalad2* | *N*-acetylated alpha-linked acidic dipeptidase 2 | 0.0040 | −3.0 |
| NM_011296.1 | *Rps18* | Ribosomal protein S18 | 0.0033 | −3.5 |
| NM_023372.1 | *Rpl38* | Ribosomal protein L38 | 0.0040 | −3.9 |
| NM_026007.2 | *Eef1g* | Eukaryotic translation elongation factor 1 gamma | 0.0039 | −4.6 |
| NM_024434.3 | *Lap3* | Leucine aminopeptidase 3 | 0.0040 | −5.0 |
| NM_007934.1 | *Enpep* | Glutamyl aminopeptidase | 0.0044 | −6.8 |

| | | | | |
|---|---|---|---|---|
| NM_025974.1 | *Rpl14* | Ribosomal protein L14 | 0.0035 | −7.0 |
| NM_173363.2 | *Eif5* | Eukaryotic translation initiation factor 5 | 0.0033 | −9.2 |
| NM_013762.1 | *Rpl3* | Ribosomal protein L3 | 0.0027 | 9.9 |
| NM_011361.1 | *Sgk* | Serum/glucocorticoid regulated kinase | 0.0035 | −11.4 |

**Supplementary Table 3. Signal transduction-related genes**

| RefSeq NM | Gene symbol | Gene name | *P*-value | Fold (1C/2C) |
|---|---|---|---|---|
| NM_009886.1 | *Celsr1* | Cadherin EGF LAG seven-pass G-type receptor 1 | 0.0009 | 129.1 |
| NM_175414.2 | *9430079M16Rik* | RIKEN cDNA 9430079M16 gene | 0.0030 | 127.4 |
| NM_008482.1 | *Lamb1-1* | Laminin B1 subunit 1 | 0.0002 | 99.8 |
| NM_007395.1 | *Acvr1b* | Activin A receptor, type 1B | 0.0023 | 98.5 |
| NM_009910.1 | *Cxcr3* | Chemokine (C-X-C motif) receptor 3 | 0.0029 | 56.4 |
| NM_145592.1 | *Dkk4* | Dickkopf homolog 4 (Xenopus laevis) | 0.0012 | 38.1 |
| NM_009061.2 | *Rgs2* | Regulator of G-protein signaling 2 | 0.0026 | 37.8 |
| NM_008881.1 | *Plxna1* | Plexin A1 | 0.0006 | 33.5 |
| NM_007407.2 | *Adcyap1r1* | Adenylate cyclase activating polypeptide 1 receptor 1 | 0.0015 | 32.5 |
| NM_013660.1 | *Sema4d* | Sema domain, immunoglobulin domain (Ig), transmembrane domain (TM) and short cytoplasmic domain, (semaphorin) 4D | 0.0043 | 30.2 |
| NM_010345.1 | *Grb10* | Growth factor receptor bound protein 10 | 0.0023 | 30.2 |
| NM_133761.2 | *Mitc1* | MAD homolog 4 interacting transcription coactivator 1 | 0.0010 | 29.9 |
| NM_146258.1 | *Stard13* | Serologically defined colon cancer antigen 13 | 0.0012 | 27.8 |
| AK007980.1 | Uncharacterised | 10-day-old male pancreas cDNA | 0.0030 | 19.4 |
| AK040199.1 | *Fyn* | Fyn proto-oncogene | 0.0049 | 18.5 |
| NM_008737.1 | *Nrp* | Neuropilin | 0.0024 | 15.7 |
| BC035550.1 | Uncharacterised | Adenylate cyclase 5 | 0.0010 | 14.4 |
| NM_010585.2 | *Itpr1* | Inositol 1,4,5-triphosphate receptor 1 | 0.0039 | 13.8 |
| NM_019588.1 | *Plce1* | Phospholipase C, epsilon 1 | 0.0035 | 12.7 |
| NM_019958.1 | *Rgs17* | Regulator of G-protein signaling 17 | 0.0020 | 9.0 |
| BC043038.1 | Uncharacterised | Rho GTPase activating protein 21 | 0.0035 | 8.3 |
| BC058251.1 | Uncharacterised | G protein-coupled receptor 125 | 0.0018 | 7.7 |
| NM_019713.2 | *Rassf1* | Ras association (RalGDS/AF-6) domain family 1 | 0.0023 | 7.3 |
| NM_010367.1 | *Baiap1* | BAI1-associated protein 1 | 0.0029 | 6.8 |
| NM_016898.1 | *Cd164* | CD164 antigen | 0.0012 | 6.8 |
| NM_145465.1 | *Stk24* | Serine/threonine kinase 24 (STE20 homolog, yeast) | 0.0014 | 6.0 |
| NM_011740.2 | *Ywhaz* | Tyrosine 3-monooxygenase/tryptophan 5-monooxygenase activation protein, zeta polypeptide | 0.0022 | 6.0 |
| NM_009071.1 | *Rock1* | Rho-associated coiled-coil forming kinase 1 | 0.0016 | 5.6 |
| NM_013622.2 | *Oprd1* | Opioid receptor, delta 1 | 0.0029 | 4.6 |
| NM_020012.1 | *Rnf14* | Ring finger protein 14 | 0.0029 | 4.3 |
| NM_011740.2 | *Ywhaz* | Tyrosine 3-monooxygenase/tryptophan 5-monooxygenase activation protein, zeta polypeptide | 0.0021 | 3.4 |
| BC055479.1 | Uncharacterised | Phosphatidylinositol 4-kinase, catalytic, alpha polypeptide | 0.0013 | −4.8 |

| | | | | |
|---|---|---|---|---|
| NM_007596.1 | *Caml* | Calcium modulating ligand | 0.0023 | −5.3 |
| NM_011083.1 | *Pik3c2a* | Phosphatidylinositol 3-kinase, C2 domain containing, alpha polypeptide | 0.0043 | −5.4 |
| BC066186.1 | *Fzd3* | Frizzled homolog 3 (*Drosophila*) | 0.0027 | −6.7 |
| NM_147092.1 | *Olfr561* | Olfactory receptor 561 | 0.0021 | −7.1 |
| NM_030739.1 | *V1rd4* | Vomeronasal 1 receptor, D4 | 0.0027 | −8.6 |
| NM_013902.2 | *Fkbp3* | FK506 binding protein 3 | 0.0025 | −12.7 |
| NM_016802.3 | *Rhoa* | Ras homolog gene family, member A | 0.0039 | −15.1 |
| NM_146281.1 | *Olfr284* | Olfactory receptor 284 | 0.0045 | −18.5 |
| AY317792.1_CDS_1 | *Olfr671* | Olfactory receptor | 0.0013 | –19.0 |
| NM_007589.4 | *Calm2* | Calmodulin 2 | 0.0040 | −24.0 |
| NM_008949.2 | *Psmc3ip* | Proteasome (prosome, macropain) 26S subunit, ATPase 3, interacting protein | 0.0040 | −26.8 |
| NM_133807.1 | *AA959742* | Expressed sequence AA959742 | 0.0007 | −27.2 |
| NM_139059.1 | *Csnk1d* | Casein kinase 1, delta | 0.0036 | −29.0 |
| NM_008960.1 | *Pten* | Phosphatase and tensin homolog | 0.0016 | −31.7 |
| NM_144547.1 | *Amhr2* | Anti-Mullerian hormone type 2 receptor | 0.0031 | −55.6 |
| NM_019774.2 | *Akap8* | A kinase (PRKA) anchor protein 8 | 0.0028 | −69.0 |
| NM_134249.3 | *Timd2* | T-cell immunoglobulin and mucin domain containing 2 | 0.0001 | −396.9 |
| NM_152229.1 | *Nr2e1* | Nuclear receptor subfamily 2, group E, member 1 | 0.0044 | 11.2 |
| BC049361.1 | Uncharacterised | CEA-related cell adhesion molecule 20 | 0.0035 | 7.2 |
| NM_153459.1 | *Dusp7* | Dual specificity phosphatase 7 | 0.0033 | 4.1 |
| NM_019958.1 | *Rgs17* | Regulator of G-protein signaling 17 | 0.0039 | 3.9 |
| NM_009790.3 | *Calm1* | Calmodulin 1 | 0.0043 | 3.2 |
| AK077136.1 | *Ppm1b* | Protein phosphatase 1B, magnesium dependent, beta isoform | 0.0044 | 2.2 |
| NM_008143.2 | *Gnb2-rs1* | Guanine nucleotide binding protein, beta 2, related sequence 1 | 0.0047 | −5.4 |
| NM_011361.1 | *Sgk* | Serum/glucocorticoid regulated kinase | 0.0035 | −11.4 |