

Table 15. The top-100 differentially expressed genes in *TCF3/PBX1* vs. B lineage ALL

| Accession no. | Gene name | Gene symbol | Entrez gene | Reporter ID | Score* | P | Sign [†] |
|---------------|--|------------------|-------------|-------------|----------|--------|-------------------|
| AA401304 | Pre-B cell leukemia transcription factor 1 | <i>PBX1</i> | 5087 | 741880 | 6.789706 | 0.0002 | + |
| BX103840 | Snf2-related CBP activator protein | <i>SRCAP</i> | 10847 | 429446 | 2.993641 | 0.0002 | + |
| H22559 | Formin homology 2 domain containing 3 | <i>FHOD3</i> | 80206 | 51807 | 2.974576 | 0.0002 | + |
| BX096523 | Uronyl-2-sulfotransferase | <i>UST</i> | 10090 | 505335 | 2.717449 | 0.0002 | + |
| AI698719 | Myeloid/lymphoid or mixed-lineage leukemia 2 | <i>MLL2</i> | 8085 | 2302544 | 2.255838 | 0.0002 | + |
| AA489331 | Adenosine deaminase, RNA-specific, B1 (RED1 homolog rat) | <i>ADARB1</i> | 104 | 842939 | 2.227474 | 0.0002 | + |
| AA825491 | Interferon regulatory factor 4 | <i>IRF4</i> | 3662 | 1358229 | 2.22339 | 0.0002 | + |
| AA946776 | Fibroblast growth factor 9 (glia-activating factor) | <i>FGF9</i> | 2254 | 1589786 | 2.204253 | 0.0002 | + |
| AA009593 | Membrane protein, palmitoylated 7 (MAGUK p55 subfamily member 7) | <i>MPP7</i> | 143098 | 365517 | 2.168292 | 0.0002 | + |
| AA394127 | Nuclear factor of activated T cells, cytoplasmic, calcineurin-dependent 4 | <i>NFATC4</i> | 4776 | 725649 | 2.131731 | 0.0002 | + |
| AA664237 | Synaptopodin | <i>SYNPO</i> | 11346 | 855610 | 2.105756 | 0.0002 | + |
| AI985408 | Solute carrier family 27 (fatty acid transporter), member 2 | <i>SLC27A2</i> | 11001 | 2496336 | 2.086332 | 0.0002 | + |
| AI360738 | KIAA1036 | <i>KIAA1036</i> | 22846 | 2011138 | 1.942721 | 0.0002 | + |
| AA428394 | HtrA serine peptidase 3 | <i>HTRA3</i> | 94031 | 773558 | 1.907847 | 0.0002 | + |
| AA425618 | Immunoglobulin superfamily, member 3 | <i>IGSF3</i> | 3321 | 773335 | 1.89824 | 0.0002 | + |
| R88680 | Hypothetical protein MGC10485 | <i>MGC10485</i> | 112936 | 166530 | 1.878579 | 0.0002 | + |
| AA629903 | Hypothetical protein LOC143458 | <i>LOC143458</i> | 143458 | 884662 | 1.866895 | 0.0002 | + |
| BX105523 | HECT, C2 and WW domain containing E3 ubiquitin protein ligase 1 | <i>NEDL1</i> | 23072 | 180885 | 1.860222 | 0.0002 | + |
| AI652019 | MAD2 mitotic arrest deficienT like 2 (yeast) | <i>MAD2L2</i> | 10459 | 2306860 | 1.811611 | 0.0002 | + |
| AA152294 | Presenilin 2 (Alzheimer disease 4) | <i>PSEN2</i> | 5664 | 491232 | 1.786587 | 0.0002 | + |
| AA504431 | Phosphatidylinositol 3,4,5-trisphosphate-dependent RAC exchanger 1 | <i>PREX1</i> | 57580 | 825270 | 1.785102 | 0.0002 | - |
| AA430410 | Hypothetical protein LOC162073 | <i>LOC162073</i> | 162073 | 769947 | 1.769117 | 0.0002 | + |
| N50428 | Hypothetical protein FLJ30046 | <i>FLJ30046</i> | 122060 | 280640 | 1.750699 | 0.0002 | + |
| N21334 | Abl interactor 2 | <i>ABI2</i> | 10152 | 265102 | 1.709876 | 0.0002 | + |
| AA426027 | Sorting nexin 3 | <i>SNX3</i> | 8724 | 757225 | 1.706259 | 0.0002 | - |
| AA430546 | KIAA0056 protein | <i>KIAA0056</i> | 23310 | 770066 | 1.702361 | 0.0002 | + |
| AA056375 | Hypothetical protein from clone 643 | <i>LOC57228</i> | 57228 | 509458 | 1.695667 | 0.0002 | - |
| AA131701 | Sperm autoantigenic protein 17 | <i>SPA17</i> | 53340 | 503866 | 1.682566 | 0.0002 | + |
| AA485439 | CGI-146 protein | <i>PNAS-4</i> | 51029 | 811058 | 1.654405 | 0.0002 | + |
| AA866153 | Protein inhibitor of activated STAT, 1 | <i>PIAS1</i> | 8554 | 1469434 | 1.649264 | 0.0002 | - |
| N95435 | Putative G protein coupled receptor | <i>GPR</i> | 11245 | 309929 | 1.612058 | 0.0002 | + |
| R26176 | Signal transducer and activator of transcription 5B | <i>STAT5B</i> | 6777 | 132857 | 1.598807 | 0.0002 | + |
| AA428001 | Activated Cdc42-associated kinase 1 | <i>ACK1</i> | 10188 | 773478 | 1.581865 | 0.0002 | + |
| AA465494 | Acyl-CoA synthetase long-chain family member 5 | <i>ACSL5</i> | 51703 | 814053 | 1.57759 | 0.0002 | - |
| AA460074 | Protein kinase, cAMP-dependent, catalytic, beta | <i>PRKACB</i> | 5567 | 796442 | 1.542128 | 0.0002 | - |
| AA453028 | Paired immunoglobulin-like type 2 receptor beta | <i>PILRB</i> | 29990 | 788355 | 1.53357 | 0.0002 | - |
| AA447661 | Sestrin 1 | <i>SESN1</i> | 27244 | 813584 | 1.532933 | 0.0002 | - |
| BX101090 | Bone morphogenetic protein 2 | <i>BMP2</i> | 650 | 359610 | 1.526689 | 0.0002 | - |
| T53169 | KIAA2002 protein | <i>KIAA2002</i> | 79834 | 68534 | 1.522924 | 0.0002 | - |
| AA424629 | Latent transforming growth factor beta binding protein 2 | <i>LTBP2</i> | 4053 | 767202 | 1.519619 | 0.0002 | + |
| W02963 | Fc receptor homolog expressed in B cells | <i>FREB</i> | 84824 | 291871 | 1.495679 | 0.0002 | + |
| AA663910 | Golgi autoantigen, golgin subfamily a, 3 | <i>GOLGA3</i> | 2802 | 855684 | 1.476934 | 0.0002 | + |
| BX105103 | Leucine rich repeat containing 28 | <i>LRRC28</i> | 123355 | 198694 | 1.44743 | 0.0002 | + |
| BX098872 | Hypothetical protein LOC339290 | <i>LOC339290</i> | 339290 | 767347 | 1.445433 | 0.0002 | - |
| AI651167 | Similar to tripartite motif-containing 16; estrogen-responsive B box protein | <i>0</i> | 147166 | 2298710 | 1.436844 | 0.0002 | + |
| AA458653 | Tribbles homolog 2 (Drosophila) | <i>TRIB2</i> | 28951 | 813426 | 1.422705 | 0.0002 | + |

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|----------|--|-----------------------|---------------|---------|----------|--------|---|
| AA465338 | KIAA0922 protein | <i>KIAA0922</i> | 23240 | 814062 | 1.421449 | 0.0002 | + |
| AA442959 | 6-pyruvoyl-tetrahydropterin synthase/dimerization cofactor of hepatocyte nuclear factor 1 alpha (TCF1) | <i>PCBD</i> | 5092 | 809421 | 1.418735 | 0.0002 | + |
| AA165567 | Mitogen-activated protein kinase kinase kinase 1 | <i>MAP3K1</i> | 4214 | 593306 | 1.404356 | 0.0002 | + |
| BX089984 | TEA domain family member 4 | <i>TEAD4</i> | 7004 | 346696 | 1.389153 | 0.0002 | + |
| AA460115 | Ornithine decarboxylase 1 | <i>ODC1</i> | 4953 | 796646 | 1.373093 | 0.0002 | + |
| AA479102 | Protein kinase C, beta 1 | <i>PRKCB1</i> | 5579 | 753923 | 1.365389 | 0.0002 | - |
| BX099314 | Chemokine-like factor super family 7 | <i>CKLFSF7</i> | 112616 | 810002 | 1.363653 | 0.0002 | + |
| AA866113 | Amyloid beta (A4) precursor protein-binding, family B, member 2 (Fe65-like) | <i>APBB2</i> | 323 | 1470333 | 1.359986 | 0.0002 | + |
| AA436591 | C-mer proto-oncogene tyrosine kinase | <i>MERTK</i> | 10461 | 753069 | 1.359224 | 0.0002 | + |
| AA406353 | Programmed cell death 6 | <i>PDCD6</i> | 10016 | 753193 | 1.356233 | 0.0002 | + |
| AI018794 | KIAA1545 protein | <i>KIAA1545</i> | 57666 | 1639072 | 1.349509 | 0.0002 | + |
| AA455565 | Transmembrane protein 9 | <i>TMEM9</i> | 252839 | 813488 | 1.345981 | 0.0002 | + |
| R78328 | CDC2-related protein kinase 7 | <i>CRK7</i> | 51755 | 145743 | 1.339453 | 0.0002 | - |
| CR743281 | CHK1 checkpoint homolog (S. pombe) | <i>CHEK1</i> | 1111 | 246524 | 1.322281 | 0.0002 | + |
| AA001874 | Solute carrier family 9 (sodium/hydrogen exchanger), isoform 9 | <i>SLC9A9</i> | 285195 | 428163 | 1.314457 | 0.0002 | - |
| AA464605 | Ankyrin repeat domain 15 | <i>ANKRD15</i> | 23189 | 812975 | 1.314367 | 0.0002 | + |
| H09923 | Poly (ADP-ribose) polymerase family, member 1 | <i>PARP1</i> | 142 | 46248 | 1.31262 | 0.0002 | + |
| AA046939 | Multiple cluster hits:351680 & 516515 | <i>0 & 0</i> | 0 & 0 | 376866 | 1.310724 | 0.0002 | + |
| W24806 | Myosin IB | <i>MYO1B</i> | 4430 | 308231 | 1.304389 | 0.0004 | - |
| AA156032 | SH3-domain binding protein 4 | <i>SH3BP4</i> | 23677 | 590145 | 1.302441 | 0.0002 | + |
| N52267 | Adaptor-related protein complex 2, beta 1 subunit | <i>AP2B1</i> | 163 | 245853 | 1.302259 | 0.0002 | + |
| AI948737 | V-ral simian leukemia viral oncogene homolog B (ras related; GTP binding protein) | <i>RALB</i> | 5899 | 2472305 | 1.300859 | 0.0002 | - |
| AI681896 | Glucuronidase, beta | <i>GUSB</i> | 2990 | 2273001 | 1.296679 | 0.0002 | - |
| AI364374 | Serine threonine kinase 39 (STE20/SPS1 homolog, yeast) | <i>STK39</i> | 27347 | 2018084 | 1.295992 | 0.0002 | + |
| AA706935 | Exostoses (multiple)-like 3 | <i>EXTL3</i> | 2137 | 451871 | 1.288723 | 0.0002 | + |
| AA429248 | HGFL gene | <i>MGC17330</i> | 113791 | 769796 | 1.286347 | 0.0002 | - |
| AA454591 | Multiple cluster hits:33333 & 388613 | <i>0 & NEO1</i> | 388134 & 4756 | 811562 | 1.283757 | 0.0002 | - |
| AA150060 | Multiple cluster hits:409081 & 534399 | <i>KMO & OPN3</i> | 8564 & 23596 | 504461 | 1.283016 | 0.0002 | + |
| AA887320 | SH3 multiple domains 1 | <i>SH3MD1</i> | 9644 | 1500815 | 1.28111 | 0.0002 | + |
| BX111769 | Calcium/calmodulin-dependent protein kinase (CaM kinase) II delta | <i>CAMK2D</i> | 817 | 713271 | 1.276468 | 0.0002 | + |
| AI343711 | Aldehyde oxidase 1 | <i>AOX1</i> | 316 | 1917741 | 1.276295 | 0.0002 | + |
| AA025434 | Family with sequence similarity 3, member D | <i>FAM3D</i> | 131177 | 365707 | 1.270146 | 0.0002 | + |
| W52272 | GLI pathogenesis-related 1 (glioma) | <i>GLIPR1</i> | 11010 | 325365 | 1.261286 | 0.0002 | - |
| AI359066 | Small nuclear ribonucleoprotein polypeptide E | <i>SNRPE</i> | 6635 | 2013064 | 1.253826 | 0.0002 | + |
| AA463323 | Chromosome 6 open reading frame 111 | <i>C6orf111</i> | 25957 | 796921 | 1.243455 | 0.0002 | - |
| AA488885 | Zinc finger protein 106 homolog (mouse) | <i>SH3BP3</i> | 64397 | 824875 | 1.240043 | 0.0002 | - |
| T59658 | Anthrax toxin receptor 2 | <i>ANTXR2</i> | 118429 | 76169 | 1.238864 | 0.0002 | - |
| AA446021 | RNA binding motif protein 17 | <i>RBM17</i> | 84991 | 781026 | 1.229704 | 0.0002 | - |
| AA449133 | CTP synthase | <i>CTPS</i> | 1503 | 785389 | 1.229429 | 0.0002 | + |
| BX103225 | Multiple cluster hits:149156 & 547053 | <i>GLDC & 0</i> | 2731 & 0 | 248261 | 1.219708 | 0.0002 | + |
| AA478659 | Nidogen 2 (osteonidogen) | <i>NID2</i> | 22795 | 754093 | 1.214565 | 0.0004 | + |
| AA452824 | Sema domain, transmembrane domain (TM), and cytoplasmic domain, (semaphorin) 6D | <i>SEMA6D</i> | 80031 | 788558 | 1.213493 | 0.0002 | + |
| AA418036 | GLI-Kruppel family member GLI3 (Greig cephalopolysyndactyly syndrome) | <i>GLI3</i> | 2737 | 767495 | 1.210923 | 0.0004 | + |
| N53376 | Phosphoinositide-3-kinase, regulatory subunit 5, p101 | <i>PIK3R5</i> | 23533 | 284004 | 1.210693 | 0.0002 | - |
| W24873 | Fucosidase, alpha-L- 1, tissue | <i>FUCA1</i> | 2517 | 308437 | 1.210151 | 0.0002 | - |
| CR736732 | 6-phosphofructo-2-kinase/fructose-2,6-biphosphatase 2 | <i>PFKFB2</i> | 5208 | 325526 | 1.208099 | 0.0002 | - |
| H85272 | Rab9 effector p40 | <i>RAB9P40</i> | 10244 | 249606 | 1.206883 | 0.0002 | - |
| AA480983 | Formin binding protein 1 | <i>FNBP1</i> | 23048 | 814620 | 1.204156 | 0.0002 | - |
| AA282272 | Acyl-Coenzyme A dehydrogenase family, member 8 | <i>ACAD8</i> | 27034 | 712950 | 1.20383 | 0.0002 | + |

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|----------|---|------------------|--------|---------|----------|--------|---|
| AA133536 | Hypothetical protein LOC147111 | <i>LOC147111</i> | 147111 | 490718 | 1.202535 | 0.0002 | - |
| N35393 | IQ motif containing E | <i>IQCE</i> | 23288 | 272100 | 1.19899 | 0.0002 | + |
| AI628353 | KIAA0882 protein | <i>KIAA0882</i> | 23158 | 2284924 | 1.191246 | 0.0002 | - |
| R23318 | Suppressor of cytokine signaling 2 | <i>SOCS2</i> | 8835 | 131073 | 1.18908 | 0.0002 | - |
| N31952 | Methylcrotonoyl-Coenzyme A carboxylase 2 (beta) | <i>MCCC2</i> | 64087 | 259374 | 1.187251 | 0.0002 | + |

*Value from discriminatory analysis, with a high value indicating a high correlation with the classes.

†The plus (+) sign indicates relative up-regulation in *TCF3/PBX1*-positive ALLs, the minus (-) sign indicates up-regulation in the remaining ALLs.