

| Gene_A | logFC_WTtu_WTn | pval_WTtu_WTn | logFC_hiTAgtu_WTn | pval_hiTAgtu_WTn | logFC_loTAgtu_WTn | pval_loTAgtu_WTn | Desc |
|---------------|----------------|---------------|-------------------|------------------|-------------------|------------------|--------------------|
| Abcb1a | -2.803 | .000988 | -2.772 | .000839 | -2.957 | .000482 | "ATP-binding |
| Actl6a | .940 | .005930 | 1.408 | .000089 | 1.503 | .000050 | actin-like |
| Agtr1a | -8.946 | .000006 | -8.226 | .000010 | -8.619 | .000008 | "angiotensin |
| Angptl1 | -3.120 | .017000 | -2.548 | .038200 | -3.177 | .011400 | angiotensin-like |
| Arhgef4 | -1.178 | .002990 | -1.108 | .003780 | -1.317 | .000852 | Rho |
| Arid5b | -2.632 | .005950 | -1.730 | .029900 | -2.413 | .008920 | AT |
| Aspm | 4.154 | .000000 | 4.895 | .000000 | 4.556 | .000000 | "asp |
| 4933424B01Rik | .921 | .022000 | 1.124 | .003970 | .940 | .014800 | "asunder |
| Atad2 | 2.922 | .000047 | 3.751 | .000002 | 3.487 | .000005 | "ATPase |
| Atxn7l1 | -.177 | .000130 | -.177 | .000096 | -.175 | .000127 | ataxin |
| Bcl2l2 | -.791 | .031200 | -.366 | .021100 | -.366 | .020700 | BCL2-like |
| Bms1 | .992 | .010600 | 1.038 | .005750 | .828 | .023400 | "BMS1 |
| Brca2 | 2.680 | .000824 | 3.563 | .000029 | 2.673 | .000697 | breast |
| Bub1 | 3.686 | .000002 | 4.481 | .000000 | 4.267 | .000000 | budding |
| 2010107G23Rik | -2.961 | .002350 | -2.451 | .008330 | -3.116 | .001180 | RIKEN |
| 1500015O10Rik | -2.924 | .004310 | -2.993 | .002700 | -2.831 | .004400 | RIKEN |
| Cbx1 | .885 | .030200 | .945 | .015400 | 1.140 | .003970 | chromobox |
| Cbx5 | 1.512 | .006900 | 3.034 | .000518 | 1.155 | .030300 | chromobox |
| Ccbe1 | -.979 | .000425 | -.978 | .000329 | -.906 | .000746 | collagen |
| Ccnb2 | 3.141 | .000030 | 3.504 | .000006 | 3.395 | .000011 | cyclin |
| Cd93 | -.104 | .038700 | -.104 | .029900 | -.104 | .030200 | CD93 |
| Cdc20 | 2.804 | .000076 | 3.176 | .000013 | 3.036 | .000026 | cell |
| Cdc6 | 4.181 | .000003 | 5.031 | .000000 | 4.368 | .000001 | cell |
| Cdk1 | 2.438 | .000045 | 2.954 | .000003 | 2.500 | .000029 | cyclin-dependent |
| Cdk2ap1 | .860 | .032000 | .890 | .020300 | .853 | .020600 | CDK2 |
| Cds2 | -.896 | .005410 | -.875 | .004940 | -1.128 | .000537 | CDP-diacylglycerol |
| Cenpa | 3.084 | .000168 | 3.686 | .000016 | 3.179 | .000104 | centromere |
| Cenpc1 | .890 | .048500 | 1.106 | .011800 | 1.370 | .002300 | centromere |
| Cenpf | 4.341 | .000005 | 5.158 | .000000 | 4.750 | .000001 | centromere |
| Cenph | 3.156 | .000006 | 3.798 | .000000 | 3.608 | .000001 | centromere |
| Cenpn | 3.866 | .000005 | 4.655 | .000000 | 3.641 | .000010 | centromere |
| Cgrrf1 | -.697 | .013800 | -.794 | .003910 | -.754 | .005960 | cell |
| Chek1 | 3.508 | .000195 | 4.475 | .000009 | 4.319 | .000017 | checkpoint |
| Ckap2 | 1.821 | .000927 | 2.344 | .000047 | 1.582 | .002680 | cytoskeleton |
| Ckap5 | 1.225 | .003170 | 1.697 | .000091 | 1.051 | .008300 | cytoskeleton |
| Creb3 | -.271 | .000106 | -.255 | .000155 | -.286 | .000051 | cAMP |
| Cse1l | 1.380 | .004460 | 1.539 | .001310 | 1.692 | .000560 | chromosome |
| Cyb5r3 | -1.959 | .005730 | -1.624 | .003480 | -2.428 | .000075 | cytochrome |
| Dctpp1 | 1.938 | .038600 | 2.280 | .010700 | 1.901 | .031100 | dCTP |
| Depdc1a | 2.951 | .000608 | 4.319 | .000006 | 4.470 | .000005 | DEP |
| Depdc1b | 2.503 | .001270 | 3.716 | .000013 | 2.624 | .000661 | DEP |
| Dna2 | 2.827 | .000047 | 4.288 | .000000 | 3.510 | .000003 | DNA |
| Dnajc9 | 1.410 | .004040 | 2.176 | .000037 | 1.629 | .000881 | "DnaJ |
| Dock8 | -.103 | .038700 | -.103 | .029900 | -.103 | .030200 | dedicator |
| Dpy30 | 1.342 | .007550 | 1.379 | .004620 | 1.138 | .018100 | dpy-30 |
| Dtymk | 1.510 | .007720 | 1.198 | .027600 | 2.058 | .000385 | deoxythymidylate |
| E2f7 | 4.257 | .000010 | 5.298 | .000000 | 4.121 | .000013 | E2F |
| Ect2 | 2.990 | .000064 | 4.172 | .000001 | 3.812 | .000003 | ect2 |
| Egfr | -.107 | .038700 | -.107 | .029900 | -.107 | .030200 | epidermal |

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|---------------|--------|---------|--------|---------|--------|---------|------------------------|
| 2900064A13Rik | -2.430 | .004130 | -1.988 | .014300 | -1.791 | .026800 | ER |
| Emcn | -.889 | .000000 | -.889 | .000000 | -.889 | .000000 | endomucin |
| Eme1 | 3.056 | .008150 | 3.472 | .002180 | 2.658 | .016600 | essential |
| Epha3 | -2.340 | .022000 | -2.458 | .012200 | -2.045 | .034100 | Eph |
| Eri2 | 1.722 | .022100 | 2.041 | .005070 | 2.220 | .002620 | exoribonuclease |
| Espl1 | 3.012 | .000939 | 4.024 | .000032 | 2.619 | .002700 | extra |
| Ezh2 | 2.322 | .000021 | 3.192 | .000000 | 3.005 | .000001 | enhancer |
| Fam13c | -2.650 | .016700 | -2.695 | .011200 | -2.830 | .008140 | "family |
| Fanca | 3.037 | .000063 | 4.002 | .000002 | 2.486 | .000429 | "Fanconi |
| Fancd2 | 2.923 | .000448 | 3.477 | .000051 | 2.923 | .000366 | "Fanconi |
| Fancf | 1.478 | .024700 | 1.477 | .019500 | 1.984 | .002170 | "Fanconi |
| Fanci | 2.161 | .004070 | 2.776 | .000295 | 2.481 | .000940 | "Fanconi |
| Fen1 | 2.687 | .000002 | 2.965 | .000000 | 2.961 | .000000 | flap |
| Fgr | -.032 | .042800 | -.032 | .034000 | -.032 | .034300 | Gardner-Rasheed |
| Fmo2 | -9.102 | .000009 | -9.211 | .000006 | -8.368 | .000022 | flavin |
| Fmo3 | -5.031 | .000111 | -5.241 | .000051 | -4.021 | .000908 | flavin |
| Foxm1 | 4.260 | .000015 | 5.767 | .000000 | 3.485 | .000126 | forkhead |
| Foxp1 | 2.059 | .003530 | 1.676 | .013000 | 1.874 | .010100 | forkhead |
| Ggct | -.049 | .039600 | -.049 | .031000 | -.049 | .031200 | gamma-glutamyl |
| Gimap6 | -.128 | .044700 | -.129 | .033900 | -.120 | .047800 | "GTPase |
| Gins1 | 3.550 | .000120 | 4.179 | .000013 | 3.993 | .000028 | GIN5 |
| Gins2 | 2.691 | .000080 | 3.753 | .000001 | 2.485 | .000158 | GIN5 |
| Gmcl1 | 1.869 | .005310 | .631 | .029500 | .687 | .017900 | germ |
| Gmnn | 2.198 | .000900 | 3.044 | .000020 | 2.906 | .000040 | geminin |
| Gtf2h2 | 1.151 | .035300 | 1.118 | .030300 | 1.477 | .005120 | "general |
| Hat1 | 1.659 | .004310 | 2.723 | .000020 | 1.917 | .000942 | histone |
| Hells | 4.127 | .000000 | 5.097 | .000000 | 4.577 | .000000 | "helicase |
| Hjurp | 1.519 | .000593 | 2.378 | .000003 | 1.175 | .004770 | Holliday |
| Hmmr | 3.135 | .000029 | 3.620 | .000004 | 3.664 | .000004 | hyaluronan |
| Hn1l | 1.433 | .005150 | 1.221 | .012800 | 1.367 | .005800 | hematological |
| Hnmt | -.481 | .003870 | -.480 | .002940 | -.478 | .003110 | histamine |
| Hnrnpab | .934 | .001430 | .965 | .000804 | .946 | .002010 | heterogeneous |
| Hpgd | -6.768 | .000000 | -6.751 | .000000 | -6.020 | .000001 | hydroxyprostaglandin |
| Il1rap | -.035 | .041700 | -.035 | .033000 | -.035 | .033200 | interleukin |
| Ilf3 | 1.336 | .038700 | 1.391 | .024100 | 1.505 | .014700 | interleukin |
| Jam2 | -2.808 | .000001 | -2.837 | .000001 | -2.821 | .000001 | junction |
| Et14 | -.723 | .000000 | -.740 | .000000 | -.755 | .000000 | enhancer |
| C330027C09Rik | 3.267 | .000035 | 4.359 | .000001 | 3.664 | .000008 | RIKEN |
| Kif13b | -.197 | .040400 | -.196 | .032700 | -2.318 | .013400 | kinesin |
| Kif23 | 5.403 | .000000 | 6.012 | .000000 | 5.615 | .000000 | kinesin |
| Kif2c | 3.918 | .000006 | 4.319 | .000001 | 3.996 | .000004 | kinesin |
| Lmbr1 | -.684 | .000163 | -.704 | .000087 | -.642 | .000264 | limb |
| Lmcd1 | -7.872 | .001200 | -7.345 | .001760 | -5.918 | .010000 | LIM |
| Lrpprc | 1.324 | .033200 | 1.525 | .010300 | 1.323 | .025700 | leucine-rich |
| Lrr1 | 4.090 | .000786 | 5.333 | .000034 | 5.148 | .000060 | leucine |
| Lsm3 | 1.669 | .005400 | 2.128 | .000449 | 1.443 | .012000 | "LSM3 |
| Lsm5 | 1.588 | .001360 | 1.739 | .000439 | 1.555 | .001350 | "LSM5 |
| Mad2l1 | 2.374 | .000002 | 2.869 | .000000 | 2.690 | .000000 | MAD2 |
| Mtap9 | -.066 | .040000 | -.066 | .031400 | -.064 | .037400 | microtubule-associated |
| Mark1 | -1.240 | .022200 | -3.416 | .001180 | -3.407 | .001260 | MAP/microtubule |

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|---------------|--------|---------|--------|---------|--------|---------|-----------------------------|
| Mcf2 | -1.333 | .011800 | -1.487 | .003890 | -1.448 | .004930 | multiple |
| Mcm | 2.627 | .000008 | 4.035 | .000000 | 2.674 | .000011 | minichromosome |
| Mcm4 | 2.270 | .000036 | 3.213 | .000000 | 3.497 | .000000 | minichromosome |
| Mcm6 | 2.685 | .000005 | 3.762 | .000000 | 3.315 | .000001 | "minichromosome |
| Mcm7 | 2.168 | .000805 | 3.104 | .000008 | 2.650 | .000085 | minichromosome |
| Melk | 3.496 | .000051 | 4.321 | .000003 | 3.714 | .000022 | maternal |
| 2610039C10Rik | 1.765 | .000301 | 3.065 | .000000 | 2.663 | .000002 | MIS18 |
| Mki67 | 3.274 | .000015 | 3.662 | .000003 | 3.389 | .000009 | antigen |
| Mphosph9 | 1.476 | .023900 | 2.647 | .000109 | 2.206 | .000789 | M-phase |
| Mrpl13 | 1.263 | .001600 | 1.165 | .002550 | 1.801 | .000034 | mitochondrial |
| Mrpl28 | .841 | .020200 | 1.575 | .004020 | 1.023 | .003730 | mitochondrial |
| Naa38 | 1.317 | .010700 | 2.094 | .000107 | 1.943 | .000266 | "N(alpha)-acetyltransferase |
| Nampt | 1.440 | .045800 | 2.335 | .001260 | 1.917 | .006780 | nicotinamide |
| Ncapd3 | 1.857 | .005680 | 2.994 | .000020 | 2.775 | .000100 | "non-SMC |
| Ndc80 | 3.345 | .000005 | 4.100 | .000000 | 4.060 | .000000 | "NDC80 |
| Nmral1 | 2.354 | .030900 | 3.061 | .003740 | 2.677 | .010400 | NmrA-like |
| Nol7 | .966 | .022400 | 1.242 | .002660 | 1.443 | .000711 | nucleolar |
| Nr3c2 | -.908 | .000000 | -.897 | .000000 | -.903 | .000000 | "nuclear |
| Nsun3 | -.520 | .000026 | -.544 | .000011 | -.491 | .000042 | NOL1/NOP2/Sun |
| Nucks1 | .844 | .000187 | .894 | .000074 | .772 | .000392 | nuclear |
| Nup107 | 2.079 | .000019 | 2.270 | .000004 | 1.952 | .000033 | nucleoporin |
| Nup155 | 1.974 | .000238 | 2.172 | .000062 | 1.909 | .000278 | nucleoporin |
| Nup37 | 1.528 | .013000 | 1.873 | .001940 | 1.714 | .004230 | nucleoporin |
| Nup54 | 1.151 | .004970 | 1.572 | .000195 | 1.733 | .000078 | nucleoporin |
| Nusap1 | 3.128 | .000009 | 4.247 | .000000 | 4.112 | .000000 | nucleolar |
| Oip5 | 2.197 | .000259 | 3.022 | .000005 | 2.322 | .000122 | Opa |
| Pam | -.841 | .017200 | -1.365 | .000184 | -1.098 | .001670 | peptidylglycine |
| 4930547N16Rik | 2.915 | .000047 | 3.088 | .000017 | 3.077 | .000022 | PARP1 |
| Pcna | 1.708 | .000018 | 2.519 | .000000 | 2.189 | .000001 | proliferating |
| Pcxl2 | -4.383 | .000000 | -4.383 | .000000 | -4.355 | .000000 | pecanex-like |
| Pcsk5 | -2.732 | .000428 | -2.575 | .000593 | -2.386 | .001280 | proprotein |
| Pdia3 | -1.980 | .001070 | -2.043 | .000615 | -1.327 | .019700 | protein |
| Pdia6 | -.193 | .000481 | -.193 | .000370 | -.192 | .000410 | protein |
| Pdpn | -1.905 | .016400 | -1.513 | .042400 | -1.759 | .020600 | podoplanin |
| Pdrg1 | -1.459 | .040400 | -1.709 | .013300 | -2.094 | .002920 | p53 |
| H2-Ke2 | .931 | .030900 | 1.133 | .006310 | 1.031 | .012400 | H2-K |
| Plk1 | 3.362 | .000117 | 3.649 | .000034 | 2.604 | .001260 | polo-like |
| Pnpt1 | 1.239 | .001200 | .942 | .009230 | .906 | .012000 | polyribonucleotide |
| Podn | -.390 | .017100 | -.434 | .006050 | -.432 | .006370 | podocan |
| Pola1 | 3.538 | .000259 | 5.035 | .000003 | 4.389 | .000021 | "polymerase |
| Pold3 | 1.541 | .038700 | 1.838 | .001340 | 2.312 | .001680 | "polymerase |
| Ppih | 2.315 | .030800 | 2.438 | .010000 | 2.528 | .007930 | peptidyl |
| Prkci | .855 | .015200 | 1.797 | .000031 | .667 | .044400 | "protein |
| Prpf19 | .786 | .003230 | .540 | .031400 | .658 | .010000 | PRP19/PSO4 |
| Psmc3ip | 2.241 | .000084 | 2.694 | .000007 | 2.641 | .000034 | "proteasome |
| Ptcd2 | 1.207 | .009320 | .966 | .029900 | 1.321 | .003570 | pentatricopeptide |
| Ptdss2 | -.107 | .000232 | -.124 | .000033 | -.124 | .000039 | phosphatidylserine |
| Pter | -1.698 | .002720 | -1.802 | .001200 | -1.583 | .003850 | phosphotriesterase |
| Ptplad1 | -1.266 | .018600 | -1.036 | .032600 | -1.968 | .000350 | protein |
| Racgap1 | 3.637 | .000010 | 4.484 | .000001 | 3.633 | .000010 | Rac |

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|---------------|--------|---------|--------|---------|--------|---------|--------------------|
| Rad18 | 3.027 | .000030 | 2.347 | .000025 | 2.013 | .000161 | RAD18 |
| Rad21 | 1.217 | .000927 | 1.674 | .000159 | 1.863 | .000008 | RAD21 |
| Rad50 | 1.214 | .003360 | .926 | .019300 | 1.178 | .003400 | RAD50 |
| Ran | .858 | .003900 | .942 | .000697 | .983 | .000908 | "RAN |
| Rapgef3 | -1.161 | .001600 | -1.324 | .000349 | -1.359 | .000281 | Rap |
| Rbm14 | 1.348 | .027300 | 1.982 | .001050 | 1.516 | .009750 | RNA |
| Rell1 | .847 | .033600 | 2.043 | .000007 | 1.743 | .000051 | RELT-like |
| Rfc4 | 2.334 | .000106 | 3.648 | .000000 | 3.172 | .000003 | replication |
| Rfc5 | 3.052 | .000006 | 3.795 | .000000 | 2.689 | .000022 | replication |
| Rhobtb1 | -2.343 | .007820 | -2.460 | .004040 | -1.638 | .049000 | Rho-related |
| Samd4b | -1.879 | .005940 | -1.511 | .021300 | -2.313 | .000761 | sterile |
| Scamp1 | -1.338 | .025600 | -1.463 | .010900 | -1.387 | .015800 | secretory |
| Selp | -4.438 | .000000 | -4.441 | .000000 | -4.441 | .000000 | "selectin |
| Set | 1.172 | .007450 | 1.210 | .004390 | 1.362 | .001670 | SET |
| Setdb1 | 1.027 | .029000 | 1.762 | .000252 | 1.481 | .001450 | "SET |
| Setdb2 | 1.309 | .012100 | 2.695 | .000007 | 2.011 | .000210 | "SET |
| Shcbp1 | 3.400 | .000031 | 4.015 | .000003 | 3.915 | .000005 | Shc |
| Shfm1 | .719 | .011800 | .635 | .020900 | .865 | .002140 | split |
| Sirt2 | -1.113 | .003010 | -.931 | .009360 | -1.559 | .000087 | "sirtuin |
| Skp2 | 2.856 | .000254 | 3.473 | .000021 | 3.946 | .000108 | S-phase |
| Slc16a9 | -4.760 | .000000 | -5.092 | .000000 | -5.092 | .000000 | "solute |
| Slc44a1 | -1.779 | .007040 | -1.867 | .003630 | -1.350 | .031000 | "solute |
| Slk | 1.319 | .030900 | 1.407 | .010600 | 1.344 | .014600 | STE20-like |
| Smc2 | 2.427 | .000100 | 3.089 | .000004 | 2.815 | .000017 | structural |
| Smc4 | 1.533 | .020300 | 2.750 | .000080 | 2.299 | .001120 | structural |
| Snrpd1 | 1.013 | .004280 | 1.635 | .000024 | 1.151 | .001090 | small |
| Snrpe | 1.079 | .002510 | 1.146 | .001100 | 1.373 | .000196 | small |
| Sox17 | -.088 | .038700 | -.088 | .030000 | -.088 | .030300 | SRY-box |
| Spag5 | 4.387 | .000000 | 4.797 | .000000 | 4.127 | .000000 | sperm |
| Spc25 | 2.351 | .000028 | 2.650 | .000005 | 2.824 | .000003 | "SPC25 |
| Spock2 | -5.212 | .000000 | -5.128 | .000000 | -5.243 | .000000 | "sparc/osteonectin |
| Spry4 | -3.103 | .000162 | -2.949 | .000209 | -2.841 | .000334 | sprouty |
| Spsb1 | -3.225 | .000000 | -3.112 | .000000 | -3.226 | .000000 | splA/ryanodine |
| St6galnac3 | -.124 | .038700 | -.124 | .030100 | -.124 | .030300 | "ST6 |
| Stil | 2.358 | .005680 | 3.282 | .000190 | 2.259 | .006120 | Scl/Tal1 |
| Stmn1 | 1.710 | .001500 | 2.427 | .000028 | 1.670 | .001520 | stathmin |
| Stom | -2.958 | .018900 | -2.117 | .019600 | -3.157 | .009290 | stomatin |
| Suv39h2 | 3.237 | .010600 | 4.483 | .000472 | 3.211 | .008680 | suppressor |
| Tardbp | .932 | .025100 | 1.112 | .005670 | 1.130 | .005120 | TAR |
| Tcf19 | 2.202 | .010000 | 3.608 | .000070 | 2.317 | .005250 | transcription |
| Tcf3 | 1.653 | .000045 | 1.548 | .000067 | .720 | .036600 | transcription |
| Tfdp1 | 1.203 | .004450 | 1.336 | .001350 | .828 | .037300 | transcription |
| Timeless | 3.784 | .000018 | 5.041 | .000000 | 3.939 | .000010 | timeless |
| Tmpo | 2.403 | .000024 | 3.064 | .000001 | 2.865 | .000003 | thymopoietin |
| Top2a | 5.786 | .000000 | 5.150 | .000000 | 5.211 | .000000 | topoisomerase |
| Trim27 | .943 | .011400 | 1.012 | .005080 | .700 | .046800 | tripartite |
| Trim37 | 1.192 | .017000 | 1.606 | .001170 | 1.398 | .004030 | tripartite |
| Trip13 | 2.539 | .000135 | 3.225 | .000006 | 2.880 | .000029 | thyroid |
| 1190005F20Rik | -.161 | .043400 | -.167 | .029900 | -.168 | .030200 | tRNA |
| Troap | 3.490 | .007120 | 4.489 | .000577 | 3.032 | .014800 | trophinin |

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|--------|--------|---------|--------|---------|--------|---------|-----------------------|
| Ttk | 4.461 | .000001 | 5.071 | .000000 | 5.282 | .000000 | Ttk |
| Tyms | 2.620 | .001240 | 3.099 | .000174 | 2.681 | .000813 | thymidylate |
| Ube2c | 2.633 | .000786 | 3.708 | .000014 | 2.317 | .002080 | ubiquitin-conjugating |
| Ube2t | 3.088 | .000006 | 4.031 | .000000 | 3.296 | .000002 | ubiquitin-conjugating |
| Ubxn4 | -.631 | .036500 | -.586 | .040500 | -1.031 | .000648 | UBX |
| Ung | 3.439 | .039500 | 4.929 | .002700 | 3.572 | .026800 | uracil |
| Usp14 | .921 | .010100 | 1.060 | .002480 | .959 | .005780 | ubiquitin |
| Wdr74 | 1.563 | .001240 | 1.258 | .006210 | 1.092 | .016800 | WD |
| Xpo1 | 1.233 | .000598 | 1.560 | .000034 | 1.604 | .000030 | "exportin |
| Ypel2 | -1.758 | .000005 | -1.758 | .000004 | -1.756 | .000005 | yippee-like |
| Zfp36 | -3.604 | .003880 | -2.762 | .020600 | -2.863 | .016300 | zinc |
| Zwilch | 3.161 | .000011 | 3.267 | .000005 | 3.408 | .000004 | zwilch |