

**Supplementary Table 1.** Genes and probe sets differentially expressed in LSKCD150<sup>+</sup> HSC isolated as fast proliferating (biotin low) or slow proliferating (biotin high)

Upregulated genes upon proliferation			Quiescence associated genes
Tmem168: transmembrane protein 168	Itgb1: integrin beta 1 (fibronectin receptor beta)	Nup50: nucleoporin 50	Gtl2: GTL2, imprinted maternally expressed untranslated mRNA
Rest: RE1-silencing transcription factor	Tuba8: tubulin, alpha 8	5830417I10Rik: RIKEN cDNA 5830417I10 gene	LOC665193: hypothetical protein LOC665193
Nt5dc2: 5'-nucleotidase domain containing 2	Bex6: brain expressed gene 6	Ncapd3: non-SMC condensin II complex, subunit D3	ENSMUSG00000073981: predicted gene
Ylpm1: YLP motif containing 1	Sox6: SRY-box containing gene 6	BC032204: cDNA sequence BC032204	Procr: protein C receptor, endothelial
Uchl3 // Uchl4: ubiquitin carboxyl-terminal esterase L3 // L4	Kif2c: kinesin family member 2C	Emilin2: elastin microfibril interfacer 2	Fscn1: fascin homolog 1, actin bundling protein ( <i>S. purpuratus</i> )
EG665081: predicted gene, EG665081	Gp5: glycoprotein 5 (platelet)	Gpr97: G protein-coupled receptor 97	Mrp63: mitochondrial ribosomal protein 63
Sel: selectin, lymphocyte	Mm.22337.1	Itga2b: integrin alpha 2b	Slc40a1: solute carrier family 40 (iron-regulated transporter) 1
Mcm3: minichromosome maintenance deficient 3	Runx3: runt related transcription factor 3	Rbpj: recom. signal binding protein for imm. kappa J region	Gprin2: G protein regulated inducer of neurite outgrowth 2
Polr3c: polymerase (RNA) III (DNA directed) polypeptide C	5730590G19Rik: RIKEN cDNA 5730590G19 gene	Skp2: S-phase kinase-associated protein 2 (p45)	Maf: avian musculoaponeurotic fibrosarcoma (v-maf)
Cdca5: cell division cycle associated 5	Top2a: topoisomerase (DNA) II alpha	Pphln1: periphilin 1	Tox: Thymocyte selection-associated HMG box gene
Cdca8: cell division cycle associated 8	Chek1: checkpoint kinase 1 homolog ( <i>S. pombe</i> )	Rdh11: retinol dehydrogenase 11	H2-Aa: Histocompatibility 2, class II antigen A, alpha
Cct3: chaperonin subunit 3 (gamma)	Rbbp4: retinoblastoma binding protein 4	Taf5: TAF5 RNA polymerase II, TATA box binding protein	Mpa2l: macrophage activation 2 like
Hells: helicase, lymphoid specific	5730593F17Rik: RIKEN cDNA 5730593F17 gene	Mm.211236.1	Alg13: asparagine-linked glycosylation 13 homolog
BC055324: cDNA sequence BC055324	Fzr1: fizzy/cell division cycle 20 related 1	Dph4: DPH4 homolog (JJJ3, <i>S. cerevisiae</i> )	Ctss: cathepsin S
2810457I06Rik: RIKEN cDNA 2810457I06 gene	Cdc6: cell division cycle 6 homolog	Gins4: GINS complex subunit 4 (Slc5 homolog)	Ndn: necidin
Chek1: checkpoint kinase 1 homolog ( <i>S. pombe</i> )	Fen1: flap structure specific endonuclease 1	Cul5: cullin 5	Evc2: Ellis van Creveld syndrome 2 homolog (human)
Plek: pleckstrin	Prc1: protein regulator of cytokinesis 1	Trpc2: transient receptor potential cation channel, subfamily C	Raph1: Ras association and pleckstrin homology domains 1
Nek2: NIMA (never in mitosis gene a) - expressed kinase 2	Ercc6l: excision repair cross-complementing 6	Transcribed locus	H2-Aa: histocompatibility 2, class II antigen A, alpha
Polb: polymerase (DNA directed), beta	Sel: selectin, lymphocyte	Mm.168959.1	ElaC1: elAC homolog 1 ( <i>E. coli</i> )
Ube2c: ubiquitin-conjugating enzyme E2C	Rrp12: ribosomal RNA processing 12 homolog	Zdhhc13: Zinc finger, DHHC domain containing 13	Gmpr2: guanosine monophosphate reductase 2
Prc1: protein regulator of cytokinesis 1	Otpn: optineurin	Ccl27: chemokine (C-C motif) ligand 27	Calm3: Calmodulin 3
C79407: expressed sequence C79407	E030041M21Rik: RIKEN cDNA E030041M21 gene	3110048E14Rik: RIKEN cDNA 3110048E14 gene	Marveld1: MARVEL (membrane-associating) domain 1
Thoc3: THO complex 3	Utx: ubiquitously transcribed tetratricopeptide repeat gene	Zw10ch: Zw10ch, kinetochore associated, homolog	Vcam1: vascular cell adhesion molecule 1
B230333C21Rik: RIKEN cDNA B230333C21 gene	Atp10a: ATPase, class V, type 10A	Uck2: Uridine-cytidine kinase 2	
Slc14a1: solute carrier family 14 (urea transporter), member 1	Cpa3: carboxypeptidase A3, mast cell	Otdub7b: OTU domain containing 7B	
Add3: adducin 3 (gamma)	Lin7c: lin-7 homolog C ( <i>C. elegans</i> )	4633401B06Rik: RIKEN cDNA 4633401B06 gene	
Cdca5: cell division cycle associated 5	6530415H11Rik: RIKEN cDNA 6530415H11 gene	Zfp472: zinc finger protein 472	
Ncor1: nuclear receptor co-repressor 1	Snx6: sorting nexin 6	Clasp1: CLIP associating protein 1	
Pnn: pinin	Ccdc99: coiled-coil domain containing 99	Mns1: meiosis-specific nuclear structural protein 1	
Prpf4b: PRP4 pre-mRNA processing factor 4 homolog B	4933435A13Rik: RIKEN cDNA 4933435A13 gene	Aft3: AF4/FMR2 family, member 3	
Coq7: demethyl-Q 7	Lima1: LIM domain and actin binding 1	Hspa4l: heat shock protein 4 like	
BC005512 // hypothetical protein LOC670270	Top2a: topoisomerase (DNA) II alpha	Pus7: pseudouridylylate synthase 7 homolog	
Gnptab: N-acetylglucosamine-1-phosphate transferase	Diap3: diaphanous homolog 3	Lonp1: ion peptidase 1, mitochondrial	
2600005O03Rik: RIKEN cDNA 2600005O03 gene	Centf: centromere protein F	Nipbl: Nipped-B homolog ( <i>Drosophila</i> )	
Tgfb1: transforming growth factor, beta 1	Mars: methionine-tRNA synthetase	5430440L12Rik: RIKEN cDNA 5430440L12 gene	
Plac8: placenta-specific 8	Uhrf1: ubiquitin-like, containing PHD and RING finger domains, 1	Ap2b1: adaptor-related protein complex 2, beta 1 subunit	
Ndc80: NDC80 homolog, kinetochore complex component	Baz1a: bromodomain adjacent to zinc finger domain 1A	Dnajc3a: DnaJ (Hsp40) homolog, subfamily C, member 3A	
Ccdc34: coiled-coil domain containing 34	Bim: Bloom syndrome homolog (human)	Mm.37417.1	
Mcm5: minichromosome maintenance deficient 5	1110018G07Rik: RIKEN cDNA 1110018G07 gene	Rgs12: regulator of G-protein signaling 12	
Mphosph1: M-phase phosphoprotein 1	Coro7: coronin 7	Klh128: kelch-like 28 ( <i>Drosophila</i> )	
Cd48: CD48 antigen	E2f7: E2F transcription factor 7	Ncapb: non-SMC condensin I complex, subunit H	
Nuf2: NUF2, NDC80 kinetochore complex component	Snx30: sorting nexin family member 30	Gm1964: gene model 1964, (NCBI)	
Mm.212854.1	Me2: malic enzyme 2, NAD(+) -dependent, mitochondrial	Mbnl3: muscleblind-like 3 ( <i>Drosophila</i> )	
Mast4: microtubule associated serine/threonine kinase 4	Kntc1: kinetochore associated 1	Lrrk2: leucine-rich repeats and IQ motif containing 2	
Nkg7: natural killer cell group 7 sequence	Cdca8: cell division cycle associated 8	Aspm: asp (abnormal spindle)-like, microcephaly associated	
D2Ertd750e: DNA segment, Chr 2, ERATO Doi 750	Cdca2: cell division cycle associated 2	Clspn: claspin homolog ( <i>Xenopus laevis</i> )	
Plek: pleckstrin	Incenp: inner centromere protein		
Lgals9: lectin, galactose binding, soluble 9	Gtf2e1: general transcription factor II E, polypeptide 1		