

Table S1. Genes overexpressed in E47 deficient versus wild type HSCs**Primary adoptive transfer**

Gene	Probe ID	J5	FC	annotation
D3ErtD300e	A_52_P92514	22.705	49.035	Mus musculus DNA segment, Chr 3, ERATO Doi 300, expressed, mRNA (cDNA clone MGC:64649 IMAGE:6400922), complete cds. [BC052702]
Acacb	A_52_P340167	23.413	39.242	Mus musculus acetyl-Coenzyme A carboxylase beta (Acacb), mRNA [NM_133904]
Pold1	A_52_P333178	24.622	35.035	Mus musculus polymerase (DNA directed), delta 1, catalytic subunit (Pold1), mRNA [NM_011131]
NAP123917-1	A_52_P256656	20.396	33.549	Unknown
Gbp6	A_51_P463846	20.14	32.820	Mus musculus guanylate binding protein 6 (Gbp6), mRNA [NM_145545]
Emilin1	A_51_P222359	22.454	24.993	Mus musculus elastin microfibril interfacer 1 (Emilin1), mRNA [NM_133918]
Gcs1	A_51_P188666	20.738	17.272	Mus musculus glucosidase 1 (Gcs1), mRNA [NM_020619]
Nucb1	A_51_P433733	23.806	13.194	Mus musculus nucleobindin 1 (Nucb1), mRNA [NM_008749]
NAP043517-1	A_52_P350138	24.971	10.383	Unknown
Zfp212	A_51_P135004	23.427	10.259	Mus musculus Zinc finger protein 212 (Zfp212), mRNA [NM_145576]
Edf1	A_51_P160567	20.548	9.412	Mus musculus endothelial differentiation-related factor 1 (Edf1), mRNA [NM_021519]
2410104I19Rik	A_51_P177583	23.028	7.301	Mus musculus RIKEN cDNA 2410104I19 gene (2410104I19Rik), transcript variant 2, mRNA [NM_133691]
Sec24c	A_51_P186564	21.785	7.194	Mus musculus SEC24 related gene family, member C (S. cerevisiae) (Sec24c), mRNA [NM_172596]
Ccs	A_51_P193536	25.171	6.635	Mus musculus copper chaperone for superoxide dismutase (Ccs), mRNA [NM_016892]
H2-Ke2	A_51_P368855	33.855	5.873	Mus musculus H2-K region expressed gene 2 (H2-Ke2), mRNA [NM_010385]
Maz	A_52_P253843	22.484	5.195	Mus musculus MYC-associated zinc finger protein (purine-binding transcription factor) (Maz), mRNA [NM_010772]
BI133744	A_52_P549954	20.242	4.885	UI-M-BH3-bsc-d-11-0-UI.s1 NIH_BMAP_M_S4 Mus musculus cDNA clone UI-M-BH3-bsc-d-11-0-UI 3', mRNA sequence [BI133744]
Chd4	A_51_P454280	30.563	4.602	Mus musculus chromodomain helicase DNA binding protein 4 (Chd4), mRNA [NM_145979]
Ddb1	A_51_P459538	24.004	4.509	Mus musculus damage specific DNA binding protein 1 (Ddb1), mRNA [NM_015735]
Slc25a27	A_52_P104091	20.816	4.407	Mus musculus solute carrier family 25, member 27 (Slc25a27), mRNA [NM_028711]
Cct8	A_52_P456279	25.102	4.039	Mus musculus chaperonin subunit 8 (theta) (Cct8), mRNA [NM_009840]
Tap2	A_52_P86176	23.634	3.851	Mus musculus transporter 2, ATP-binding cassette, sub-family B (MDR/TAP) (Tap2), mRNA [NM_011530]
Hspa8	A_52_P12877	26.121	3.771	Mus musculus heat shock protein 8 (Hspa8), mRNA [NM_031165]
Noc2l	A_52_P497193	28.601	3.755	Mus musculus nucleolar complex associated 2 homolog (S. cerevisiae) (Noc2l), mRNA [NM_021303]
NAP107236-1	A_52_P80305	21.853	3.376	Unknown
Pabpn1	A_52_P743305	20.285	3.348	Mus musculus adult male urinary bladder cDNA, RIKEN full-length enriched library, clone:9530063N22 product:poly(A) binding protein, nuclear 1, full insert sequence. [AK137240]
Ptges3	A_51_P474367	21.903	3.133	Mus musculus prostaglandin E synthase 3 (cytosolic) (Ptges3), mRNA [NM_019766]
Tuba4a	A_52_P409498	20.944	3.090	Mus musculus tubulin, alpha 4A (Tuba4a), mRNA [NM_009447]
AF085738	A_51_P193053	25.133	3.045	Mus musculus Sang mRNA, complete cds. [AF085738]
Pabpn1	A_52_P64783	24.196	2.949	Mus musculus adult male olfactory brain cDNA, RIKEN full-length enriched library, clone:6430407F06 product:poly(A) binding protein, nuclear 1, full insert sequence. [AK032172]
H2-K1	A_52_P474242	22.191	2.943	Mus musculus histocompatibility 2, K1, K region (H2-K1), transcript variant 1, mRNA [NM_001001892]
TC1765066	A_52_P473172	23.753	2.912	Q6QAQ1_PIG (Q6QAQ1) Cytoskeletal beta actin (Fragment), partial (60%) [TC1765066]

Gene	Probe ID	J5	FC	annotation
NAP123700-1	A_52_P399536	30.113	2.868	Unknown
Ndufa5	A_51_P170156	20.573	2.857	Mus musculus NADH dehydrogenase (ubiquinone) 1 alpha subcomplex, 5 (Ndufa5), mRNA [NM_026614]
ENSMUST00000077662	A_51_P191463	23.437	2.771	histocompatibility 2, M region locus 2 [Source:MarkerSymbol;Acc:MGI:95914] [ENSMUST00000077662]
NAP027924-1	A_52_P57582	40.609	2.757	Unknown
Lmo2	A_51_P223686	24.184	2.729	Mus musculus LIM domain only 2 (Lmo2), mRNA [NM_008505]
Fus	A_52_P320032	27.101	2.654	Mus musculus fusion, derived from t(12;16) malignant liposarcoma (human) (Fus), mRNA [NM_139149]
Ak2	A_52_P68101	22.528	2.629	Mus musculus adenylate kinase 2 (Ak2), transcript variant 2, mRNA [NM_016895]
Nsbp1	A_52_P498608	41.233	2.610	Mus musculus nucleosome binding protein 1 (Nsbp1), mRNA [NM_016710]
LOC625815	A_52_P649064	36.985	2.604	PREDICTED: Mus musculus similar to ATP synthase, H+ transporting, mitochondrial F0 complex, subunit f, isoform 2 (LOC625815), mRNA [XM_890383]
2410016F19Rik	A_52_P627793	20.616	2.579	Mus musculus RIKEN cDNA 2410016F19 gene (2410016F19Rik), mRNA [NM_026113]
Shfm1	A_51_P180032	21.835	2.567	Mus musculus split hand/foot malformation (ectrodactyly) type 1 (Shfm1), mRNA [NM_009169]
Cd63	A_51_P511810	20.516	2.567	Mus musculus Cd63 antigen (Cd63), transcript variant 2, mRNA [NM_007653]
H2-Q2	A_51_P219789	33.799	2.546	Mus musculus histocompatibility 2, Q region locus 2 (H2-Q2), mRNA [NM_010392]
EG630499	A_51_P444565	22.866	2.538	Mus musculus predicted gene, EG630499 (EG630499), mRNA [NM_001081015]
Cfl1	A_52_P477720	22.378	2.499	Mus musculus cofilin 1, non-muscle (Cfl1), mRNA [NM_007687]
TC1629641	A_51_P400752	44.67	2.468	Q31216_MOUSE (Q31216) Class I (Qa) Q5-k antigen, complete [TC1629641]
Fus	A_51_P512364	34.236	2.438	Mus musculus fusion, derived from t(12;16) malignant liposarcoma (human) (Fus), mRNA [NM_139149]
Atp5j2	A_51_P224216	46.981	2.430	Mus musculus ATP synthase, H+ transporting, mitochondrial F0 complex, subunit f, isoform 2 (Atp5j2), mRNA [NM_020582]
H2-D1	A_52_P313279	44.732	2.423	Mus musculus histocompatibility 2, D region locus 1 (H2-D1), mRNA [NM_010380]
H2-Q10	A_51_P496997	53.291	2.408	Mus musculus histocompatibility 2, Q region locus 10 (H2-Q10), mRNA [NM_010391]
NAP056541-1	A_52_P600750	41.046	2.352	Unknown
Rps3	A_51_P318642	26.146	2.324	Mus musculus ribosomal protein S3 (Rps3), mRNA [NM_012052]
Actb	A_51_P173760	44.613	2.321	Mus musculus actin, beta, cytoplasmic (Actb), mRNA [NM_007393]
Atp5h	A_51_P264186	22.103	2.310	Mus musculus ATP synthase, H+ transporting, mitochondrial F0 complex, subunit d (Atp5h), mRNA [NM_027862]
Ifitm1	A_52_P541802	31.675	2.234	Mus musculus interferon induced transmembrane protein 1 (Ifitm1), mRNA [NM_026820]
Ramp2	A_51_P394383	36.673	2.233	Mus musculus nuclear enriched abundant transcript 2 (Neat2) mRNA, complete sequence [EF177380]
Sfrs1	A_51_P485899	21.941	2.215	Mus musculus splicing factor, arginine/serine-rich 1 (ASF/SF2) (Sfrs1), transcript variant 1, mRNA [NM_173374]
Set	A_52_P50107	21.004	2.192	Mus musculus SET translocation (Set), mRNA [NM_023871]
Ramp2	A_51_P377045	30.363	2.180	Mus musculus nuclear enriched abundant transcript 2 (Neat2) mRNA, complete sequence [EF177380]
H2-Q7	A_51_P262079	31.962	2.173	Mus musculus histocompatibility 2, Q region locus 7 (H2-Q7), mRNA [NM_010394]
Gpx1	A_52_P684378	28.113	2.169	Mus musculus glutathione peroxidase 1 (Gpx1), mRNA [NM_008160]
NAP092627-001	A_52_P382485	24.802	2.144	Unknown
Rpl13a	A_51_P235311	20.117	2.118	Mus musculus ribosomal protein L13a (Rpl13a), mRNA [NM_009438]
Ncl	A_51_P134007	32.737	2.094	Mus musculus nucleolin (Ncl), mRNA [NM_010880]
Ncl	A_52_P623337	34.236	2.002	Mus musculus nucleolin (Ncl), mRNA [NM_010880]
NAP123925-1	A_52_P353242	29.488	1.990	Unknown
Rpl19	A_52_P547021	26.302	1.915	Mus musculus ribosomal protein L19 (Rpl19), mRNA

Gene	Probe ID	J5	FC	annotation
				[NM_009078]
2010107E04Rik	A_51_P128287	21.866	1.909	Mus musculus RIKEN cDNA 2010107E04 gene (2010107E04Rik), mRNA [NM_027360]
Ubc	A_52_P238556	24.596	1.909	Mus musculus 17 days embryo kidney cDNA, RIKEN full-length enriched library, clone:I920021C12 product:ubiquitin C, full insert sequence. [AK168448]
H2-T23	A_51_P237754	26.489	1.860	Mus musculus histocompatibility 2, T region locus 23 (H2-T23), mRNA [NM_010398]
Rpl29	A_52_P505977	20.554	1.855	Mus musculus ribosomal protein L29 (Rpl29), mRNA [NM_009082]
Hnrpa1	A_51_P296940	26.077	1.850	Mus musculus heterogeneous nuclear ribonucleoprotein A1 (Hnrpa1), transcript variant 2, mRNA [NM_001039129]
ENSMUST00000078297	A_52_P497503	20.367	1.845	ribosomal protein S2 [Source:MarkerSymbol;Acc:MGI:105110] [ENSMUST00000078297]
Rps2	A_52_P277592	24.053	1.839	Mus musculus ribosomal protein S2 (Rps2), mRNA [NM_008503]
Rpl10	A_52_P171216	22.241	1.828	Mus musculus strain BALB/c QM protein mRNA, partial cds. [U89405]
BC012020	A_52_P321318	57.539	1.821	Mus musculus cDNA clone IMAGE:4500967, with apparent retained intron. [BC012020]
Snrpd1	A_51_P193254	26.989	1.799	Mus musculus small nuclear ribonucleoprotein D1 (Snrpd1), mRNA [NM_009226]
TC1712793	A_52_P127892	36.548	1.786	NM_206272 CG11624-PC, isoform C {Drosophila melanogaster} (exp=-1; wgp=0; cg=0), partial (23%) [TC1712793]
Rps3	A_52_P768	28.426	1.758	Mus musculus ribosomal protein S3 (Rps3), mRNA [NM_012052]
ENSMUST00000100152	A_52_P40168	42.733	1.741	Unknown
Sfrs5	A_52_P50090	21.679	1.738	Mus musculus splicing factor, arginine/serine-rich 5 (SRp40, HRS) (Sfrs5), transcript variant 3, mRNA [NM_009159]
Actb	A_51_P251154	26.864	1.729	Mus musculus cDNA clone IMAGE:4501052 [BC016624]
Rpl29	A_51_P400137	31.05	1.722	Mus musculus ribosomal protein L29 (Rpl29), mRNA [NM_009082]
H2-D1	A_51_P496996	25.49	1.722	Mus musculus histocompatibility 2, D region locus 1 (H2-D1), mRNA [NM_010380]
BC012020	A_52_P845178	30.113	1.691	Mus musculus cDNA clone IMAGE:4500967, with apparent retained intron. [BC012020]
Ybx1	A_52_P187132	24.053	1.677	Mus musculus Y box protein 1 (Ybx1), mRNA [NM_011732]
H2-Q1	A_52_P582814	21.366	1.650	Mus musculus 16 days neonate thymus cDNA, RIKEN full-length enriched library, clone:A130027C03 product:histocompatibility 2, Q region locus 4, full insert sequence. [AK037574]
Anp32a	A_51_P499755	23.178	1.633	Mus musculus acidic (leucine-rich) nuclear phosphoprotein 32 family, member A (Anp32a), mRNA [NM_009672]
Rpl29	A_52_P217069	23.303	1.632	Mus musculus ribosomal protein L29 (Rpl29), mRNA [NM_009082]
Hnrpa3	A_51_P443482	25.989	1.625	Mus musculus heterogeneous nuclear ribonucleoprotein A3 (Hnrpa3), transcript variant b, mRNA [NM_146130]
Ramp2	A_52_P392598	30.425	1.623	Mus musculus nuclear enriched abundant transcript 2 (Neat2) mRNA, complete sequence [EF177380]
Rps29	A_52_P158090	20.741	1.617	Mus musculus ribosomal protein S29 (Rps29), mRNA [NM_009093]
Rpl37a	A_51_P441263	22.616	1.617	Mus musculus ribosomal protein L37a (Rpl37a), mRNA [NM_009084]
Ptma	A_52_P249402	23.678	1.601	Mus musculus prothymosin alpha (Ptma), mRNA [NM_008972]
Eef1g	A_52_P609138	37.735	1.561	Mus musculus eukaryotic translation elongation factor 1 gamma (Eef1g), mRNA [NM_026007]
CYTB	A_51_P315595	22.116	1.545	cytochrome b, mitochondrial [Source:MarkerSymbol;Acc:MGI:102501] [ENSMUST00000082421]
Rpl28	A_51_P339103	27.051	1.541	Mus musculus ribosomal protein L28 (Rpl28), mRNA [NM_009081]
Rpl18	A_52_P436621	33.236	1.463	Mus musculus ribosomal protein L18 (Rpl18), mRNA [NM_009077]
Rpl3	A_51_P519024	21.366	1.462	Mus musculus ribosomal protein L3 (Rpl3), mRNA [NM_013762]
LOC622592	A_52_P18596	27.114	1.447	PREDICTED: Mus musculus similar to heterogeneous nuclear ribonucleoprotein A3 (LOC622592), mRNA [XR_003667]

Gene	Probe ID	J5	FC	annotation
Rpl19	A_51_P415162	23.365	1.425	Mus musculus ribosomal protein L19 (Rpl19), mRNA [NM_009078]
Rpl37	A_52_P150675	23.053	1.380	Mus musculus ribosomal protein L37 (Rpl37), mRNA [NM_026069]
Mid1	A_51_P510284	39.484	1.370	Mus musculus midline 1, mRNA (cDNA clone MGC:69759 IMAGE:6810837), complete cds. [BC059027]
Rpl18a	A_51_P446229	37.297	1.367	Mus musculus Ribosomal protein L18A (Rpl18a), mRNA [NM_029751]
Pif1	A_51_P467448	20.179	1.312	Mus musculus PIF1 5'-to-3' DNA helicase homolog (<i>S. cerevisiae</i>) (Pif1), mRNA [NM_172453]
Rps18	A_52_P193899	33.611	1.305	Mus musculus ribosomal protein S18 (Rps18), mRNA [NM_011296]
Gas5	A_51_P366867	20.429	1.298	M.musculus mRNA for gas5 growth arrest specific protein. [X59728]
Rpl22	A_51_P387878	22.241	1.213	Mus musculus ribosomal protein L22 (Rpl22), mRNA [NM_009079]

Secondary adoptve transfer

Gene	Probe ID	J5	FC	annotation
ENSMUSG00000075275	A_52_P1107697	31.187	5428.067	Mus musculus 13 days embryo male testis cDNA, RIKEN full-length enriched library, clone:6030499A19 product:hypothetical protein, full insert sequence. [AK031731]
Amy1	A_51_P383638	39.807	1066.361	Mus musculus amylase 1, salivary (Amy1), mRNA [NM_007446]
Rit1	A_52_P515370	33.252	212.007	Mus musculus TIB-55 BB88 cDNA, RIKEN full-length enriched library, clone:l730071O05 product:Ras-like without CAAX 1, full insert sequence [AK168254]
Eftud1	A_52_P378719	36.503	191.127	Mus musculus elongation factor Tu GTP binding domain containing 1 (Eftud1), mRNA [NM_175317]
Tyrobp	A_51_P261517	35.544	151.389	Mus musculus TYRO protein tyrosine kinase binding protein (Tyrobp), mRNA [NM_011662]
Gsta4	A_51_P112223	33.529	115.023	Mus musculus glutathione S-transferase, alpha 4 (Gsta4), mRNA [NM_010357]
Stx5a	A_51_P294550	36.344	105.681	Mus musculus syntaxin 5A (Stx5a), mRNA [NM_019829]
1810054D07Rik	A_52_P131458	33.153	82.624	Mus musculus RIKEN cDNA 1810054D07 gene (1810054D07Rik), mRNA [NM_027238]
D0HXS9928E	A_51_P368557	30.45	64.254	Mus musculus DNA segment, human DXS9928E (D0HXS9928E), mRNA [NM_138607]
Zfp110	A_51_P475298	33.96	60.423	Mus musculus zinc finger protein 110 (Zfp110), mRNA [NM_022981]
ENSMUST00000103291	A_51_P210310	33.885	58.639	T-cell receptor beta C gene segment [Source:IMGT/GENE_DB;Acc:TRBC1] [ENSMUST00000103291]
Amy1	A_51_P383644	41.14	51.613	Mus musculus amylase 1, salivary (Amy1), mRNA [NM_007446]
Stxbp4	A_52_P401783	34.302	51.369	Mus musculus 13 days embryo male testis cDNA, RIKEN full-length enriched library, clone:6030470M02 product:unclassifiable, full insert sequence. [AK031650]
Il17ra	A_52_P31577	42.764	45.330	Mus musculus interleukin 17 receptor A (Il17ra), mRNA [NM_008359]
Gpr125	A_51_P462102	31.294	45.152	Mus musculus G protein-coupled receptor 125, mRNA (cDNA clone IMAGE:5718990), partial cds. [BC052391]
ORF5	A_51_P371255	40.054	36.632	Mus musculus open reading frame 5 (ORF5), mRNA [NM_016924]
Spsb3	A_52_P613418	31.043	32.103	Mus musculus splA/ryanodine receptor domain and SOCS box containing 3 (Spsb3), mRNA [NM_027141]
Cxxc1	A_51_P262533	44.291	27.948	Mus musculus CXXC finger 1 (PHD domain) (Cxxc1), mRNA [NM_028868]
Crnk1	A_52_P440102	33.333	23.617	Mus musculus Crn, crooked neck-like 1 (<i>Drosophila</i>) (Crnk1), mRNA [NM_025820]
Slc22a17	A_51_P111907	58.883	20.591	Mus musculus solute carrier family 22 (organic cation transporter), member 17 (Slc22a17), mRNA [NM_021551]
1500032D16Rik	A_52_P175897	32.659	19.328	Mus musculus RIKEN cDNA 1500032D16 gene (1500032D16Rik), transcript variant 1, mRNA [NM_030087]

Gene	Probe ID	J5	FC	annotation
Med11	A_51_P349803	32.04	17.034	Mus musculus mediator of RNA polymerase II transcription, subunit 11 homolog (<i>S. cerevisiae</i>) (Med11), mRNA [NM_025397]
Ngp	A_52_P429450	38.087	16.907	Mus musculus neutrophilic granule protein (Ngp), mRNA [NM_008694]
Mrps12	A_51_P506937	38.989	14.729	Mus musculus mitochondrial ribosomal protein S12 (Mrps12), mRNA [NM_011885]
Stx4a	A_51_P495492	43.442	14.296	Mus musculus syntaxin 4A (placental) (Stx4a), mRNA [NM_009294]
Dctn2	A_51_P435333	35.429	13.655	Mus musculus dynactin 2 (Dctn2), mRNA [NM_027151]
Ppp4c	A_51_P208394	31.356	13.611	Mus musculus protein phosphatase 4, catalytic subunit (Ppp4c), mRNA [NM_019674]
Aup1	A_51_P165984	41.883	13.020	Mus musculus ancient ubiquitous protein (Aup1), mRNA [NM_007517]
Klf6	A_51_P503162	39.186	12.125	Mus musculus Kruppel-like factor 6 (Klf6), mRNA [NM_011803]
Msi2	A_52_P628060	37.001	11.821	Mus musculus Musashi homolog 2 (<i>Drosophila</i>) (Msi2), mRNA [NM_054043]
Tmem142c	A_51_P188602	46.364	10.919	Mus musculus transmembrane protein 142C (Tmem142c), mRNA [NM_198424]
Tom1l2	A_52_P383753	37.696	10.514	Mus musculus target of myb1-like 2 (chicken) (Tom1l2), transcript variant 1, mRNA [NM_153080]
Zfp410	A_51_P369897	35.66	10.438	Mus musculus zinc finger protein 410 (Zfp410), mRNA [NM_144833]
Mrps35	A_51_P110841	33.607	10.416	Mus musculus mitochondrial ribosomal protein S35 (Mrps35), mRNA [NM_145573]
Os9	A_51_P109171	30.236	10.241	Mus musculus amplified in osteosarcoma (Os9), mRNA [NM_177614]
Banf1	A_51_P314019	31.417	8.840	Mus musculus barrier to autointegration factor 1 (Banf1), transcript variant 1, mRNA [NM_011793]
Prdx2	A_52_P893440	38.154	8.253	Mus musculus peroxiredoxin 2 (Prdx2), mRNA [NM_011563]
H2afy	A_52_P402989	36.565	7.260	Mus musculus H2A histone family, member Y (H2afy), mRNA [NM_012015]
Itfg2	A_52_P252469	41.524	7.046	Mus musculus integrin alpha FG-GAP repeat containing 2 (Itfg2), mRNA [NM_133927]
S100a8	A_51_P256827	37.806	6.554	Mus musculus S100 calcium binding protein A8 (calgranulin A) (S100a8), mRNA [NM_013650]
Lrmp	A_51_P130079	33.022	6.551	Mus musculus lymphoid-restricted membrane protein (Lrmp), mRNA [NM_008511]
Leprot	A_51_P394690	30.661	6.341	Mus musculus leptin receptor overlapping transcript (Leprot), mRNA [NM_175036]
Angptl6	A_51_P259571	51.347	6.122	Mus musculus angiopoietin-like 6 (Angptl6), mRNA [NM_145154]
Fxyd5	A_51_P381260	30.245	5.938	Mus musculus FXD domain-containing ion transport regulator 5 (Fxyd5), mRNA [NM_008761]
Eef1d	A_51_P493079	30.976	5.896	Mus musculus eukaryotic translation elongation factor 1 delta (guanine nucleotide exchange protein) (Eef1d), transcript variant 2, mRNA [NM_023240]
Prdx2	A_52_P550034	44.699	5.876	Mus musculus peroxiredoxin 2 (Prdx2), mRNA [NM_011563]
NAP107236-1	A_52_P80305	37.749	5.344	Unknown
Cct8	A_52_P456279	33.327	5.195	Mus musculus chaperonin subunit 8 (theta) (Cct8), mRNA [NM_009840]
Calr	A_52_P672212	53.433	5.137	Mus musculus calreticulin (Calr), mRNA [NM_007591]
1700029I01Rik	A_52_P581100	30.403	5.005	Mus musculus RIKEN cDNA 1700029I01 gene (1700029I01Rik), mRNA [NM_027285]
Gdi2	A_52_P1073	38.89	4.531	Mus musculus guanosine diphosphate (GDP) dissociation inhibitor 2 (Gdi2), mRNA [NM_008112]
S100a9	A_51_P402943	37.489	4.517	Mus musculus S100 calcium binding protein A9 (calgranulin B) (S100a9), mRNA [NM_009114]
Cfp	A_51_P408363	39.797	4.425	Mus musculus complement factor properdin (Cfp), mRNA [NM_008823]
EG433225	A_52_P68714	31.484	4.369	Unknown
Pabpn1	A_52_P869483	35.006	3.964	Mus musculus poly(A) binding protein, nuclear 1 (Pabpn1), mRNA [NM_019402]
Pabpn1	A_51_P228916	40.595	3.919	Mus musculus poly(A) binding protein, nuclear 1 (Pabpn1), mRNA [NM_019402]
Laptm5	A_51_P401668	43.969	3.692	Mus musculus lysosomal-associated protein transmembrane 5

Gene	Probe ID	J5	FC	annotation
				(Lapm5), mRNA [NM_010686]
Tubb2a	A_52_P621603	54.189	3.471	Mus musculus tubulin, beta 2a (Tubb2a), mRNA [NM_009450]
Hmox2	A_52_P477819	33.83	3.147	Mus musculus heme oxygenase (decycling) 2 (Hmox2), mRNA [NM_010443]
BC012020	A_52_P845178	61.492	3.094	Mus musculus cDNA clone IMAGE:4500967, with apparent retained intron. [BC012020]
Sult1a1	A_51_P321341	31.196	3.081	Mus musculus sulfotransferase family 1A, phenol-preferring, member 1 (Sult1a1), mRNA [NM_133670]
BC012020	A_52_P321318	99.084	3.010	Mus musculus cDNA clone IMAGE:4500967, with apparent retained intron. [BC012020]
Tubb5	A_52_P163796	41.7	2.940	Mus musculus tubulin, beta 5 (Tubb5), mRNA [NM_011655]
Ncl	A_52_P623337	48.861	2.784	Mus musculus nucleolin (Ncl), mRNA [NM_010880]
OTTMUSG00000015730	A_52_P522864	36.168	2.761	Mus musculus predicted gene, OTTMUSG00000015730, mRNA (cDNA clone MGC:38507 IMAGE:5352880), complete cds. [BC023805]
Hdgf	A_51_P425080	31.429	2.749	Mus musculus hepatoma-derived growth factor (Hdgf), mRNA [NM_008231]
Ncl	A_51_P134007	41.88	2.743	Mus musculus nucleolin (Ncl), mRNA [NM_010880]
Tubb5	A_52_P163795	35.134	2.703	Mus musculus tubulin, beta 5 (Tubb5), mRNA [NM_011655]
ND4L	A_51_P245525	39.148	2.699	Mus musculus lung RCB-0558 LLC cDNA, RIKEN full-length enriched library, clone:G730042M17 product:NADH dehydrogenase 4, mitochondrial, full insert sequence. [AK144853]
Ptbp1	A_51_P462692	30.717	2.678	Mus musculus polypyrimidine tract binding protein 1 (Ptbp1), transcript variant 2, mRNA [NM_008956]
Pin4	A_51_P270478	39.778	2.628	Mus musculus protein (peptidyl-prolyl cis/trans isomerase) NIMA-interacting, 4 (parvulin) (Pin4), mRNA [NM_027181]
H2-K1	A_52_P474242	35.638	2.619	Mus musculus histocompatibility 2, K1, K region (H2-K1), transcript variant 1, mRNA [NM_001001892]
Aldh2	A_52_P116134	37.533	2.591	Mus musculus aldehyde dehydrogenase 2, mitochondrial (Aldh2), mRNA [NM_009656]
COX2	A_51_P323880	32.847	2.491	cytochrome c oxidase II, mitochondrial [Source:MarkerSymbol;Acc:MGI:102503] [ENSMUST00000082405]
Tpt1	A_52_P667098	53.426	2.422	Mus musculus tumor protein, translationally-controlled 1 (Tpt1), mRNA [NM_009429]
CYTB	A_51_P315595	44.542	2.370	cytochrome b, mitochondrial [Source:MarkerSymbol;Acc:MGI:102501] [ENSMUST00000082421]
Rpsa	A_51_P439092	35.632	2.358	Mus musculus ribosomal protein SA (Rpsa), mRNA [NM_011029]
Actb	A_51_P173760	47.069	2.301	Mus musculus actin, beta, cytoplasmic (Actb), mRNA [NM_007393]
Hnrpa3	A_51_P443482	36.848	2.290	Mus musculus heterogeneous nuclear ribonucleoprotein A3 (Hnrpa3), transcript variant b, mRNA [NM_146130]
Acin1	A_52_P223174	36.773	2.215	Mus musculus 3 days neonate thymus cDNA, RIKEN full-length enriched library, clone:A630085P16 product:unclassifiable, full insert sequence. [AK042374]
Rpl13	A_52_P668076	39.98	2.214	Mus musculus ribosomal protein L13 (Rpl13), mRNA [NM_016738]
H2-Q2	A_51_P219789	30.169	2.098	Mus musculus histocompatibility 2, Q region locus 2 (H2-Q2), mRNA [NM_010392]
TC1622094	A_52_P1157520	40.314	2.088	G7C_MOUSE (Q9JHA8) Protein G7c precursor, partial (94%) [TC1622094]
Rpl28	A_51_P339103	45.871	2.087	Mus musculus ribosomal protein L28 (Rpl28), mRNA [NM_009081]
NAP027770-1	A_52_P501387	55.802	2.054	Unknown
EG545091	A_52_P648203	30.364	2.052	PREDICTED: Mus musculus similar to Heterogeneous nuclear ribonucleoprotein A1 (Helix-destabilizing protein) (Single-strand binding protein) (hnRNP core protein A1) (HDP-1) (Topoisomerase-inhibitor suppressed), transcript variant 1 (LOC545091), mRNA...
H2-T23	A_51_P237754	38.814	2.044	Mus musculus histocompatibility 2, T region locus 23 (H2-T23), mRNA [NM_010398]
Ly6e	A_51_P148814	37.623	2.039	Mus musculus lymphocyte antigen 6 complex, locus E (Ly6e), mRNA [NM_008529]

Gene	Probe ID	J5	FC	annotation
Rps10	A_51_P169156	46.205	2.038	Mus musculus ribosomal protein S10 (Rps10), mRNA [NM_025963]
Tmsb4x	A_51_P224843	36.01	2.023	Mus musculus thymosin, beta 4, X chromosome (Tmsb4x), mRNA [NM_021278]
Rpl17	A_52_P109109	54.668	1.968	Mus musculus ribosomal protein L17 (Rpl17), mRNA [NM_001002239]
ENSMUST00000099448	A_52_P589148	37.422	1.907	PREDICTED: Mus musculus similar to ribosomal protein S18 (LOC624596), mRNA [XM_988078]
Lrrc58	A_52_P17228	30.73	1.896	Mus musculus leucine rich repeat containing 58 (Lrrc58), mRNA [NM_177093]
Ramp2	A_52_P392598	31.902	1.878	Mus musculus nuclear enriched abundant transcript 2 (Neat2) mRNA, complete sequence [EF177380]
NAP028769-1	A_52_P623690	32.337	1.876	Unknown
Rpl35	A_51_P132715	55.764	1.868	Mus musculus ribosomal protein L35 (Rpl35), mRNA [NM_025592]
Rpl23	A_52_P651894	50.597	1.835	Mus musculus ribosomal protein L23 (Rpl23), mRNA [NM_022891]
A_52_P972871	A_52_P972871	42.658	1.830	Unknown
LOC674833	A_52_P378056	38.323	1.824	PREDICTED: Mus musculus similar to 60S ribosomal protein L17 (L23) (Amino acid starvation-induced protein) (ASI) (LOC674833), mRNA [XM_978851]
ENSMUST00000096279	A_52_P412046	33.414	1.817	Unknown
BC026852	A_51_P153805	32.33	1.811	Mus musculus, clone IMAGE:4191756, mRNA. [BC026852]
NAP018080-001	A_52_P540302	47.132	1.785	Unknown
Rpl7	A_52_P346326	47.951	1.778	Mus musculus ribosomal protein L7 (Rpl7), mRNA [NM_011291]
TC1721764	A_52_P1175491	48.518	1.753	RL35_RAT (P17078) 60S ribosomal protein L35, partial (56%) [TC1721764]
Rpl17	A_52_P123268	36.861	1.740	Mus musculus ribosomal protein L17 (Rpl17), mRNA [NM_001002239]
Rps18	A_52_P193899	64.712	1.737	Mus musculus ribosomal protein S18 (Rps18), mRNA [NM_011296]
Rpl36a	A_52_P481880	33.773	1.735	Mus musculus ribosomal protein L36a (Rpl36a), mRNA [NM_019865]
NAP114245-1	A_52_P479961	41.58	1.678	Unknown
Rpl32	A_52_P573161	40.692	1.670	Mus musculus ribosomal protein L32 (Rpl32), mRNA [NM_172086]
Rpl22	A_51_P387878	52.551	1.670	Mus musculus ribosomal protein L22 (Rpl22), mRNA [NM_009079]
Rpl34	A_51_P243288	37.875	1.669	Mus musculus ribosomal protein L34 (Rpl34), transcript variant 1, mRNA [NM_026724]
Rps23	A_51_P376165	36.609	1.656	Mus musculus ribosomal protein S23 (Rps23), mRNA [NM_024175]
NAP029896-1	A_52_P178298	43.855	1.640	Unknown
H2-Q10	A_51_P496997	30.371	1.630	Mus musculus histocompatibility 2, Q region locus 10 (H2-Q10), mRNA [NM_010391]
LOC432594	A_52_P146457	33.269	1.605	PREDICTED: Mus musculus similar to 60S ribosomal protein L17 (L23) (Amino acid starvation-induced protein) (ASI) (LOC432594), mRNA [XM_484069]
Rpl19	A_51_P415162	31.379	1.596	Mus musculus ribosomal protein L19 (Rpl19), mRNA [NM_009078]
Rps26	A_51_P302675	33.269	1.589	Mus musculus ribosomal protein S26 (Rps26), mRNA [NM_013765]
Gas5	A_51_P366867	36.168	1.587	M.musculus mRNA for gas5 growth arrest specific protein. [X59728]
Rpl37	A_52_P150675	30.409	1.572	Mus musculus ribosomal protein L37 (Rpl37), mRNA [NM_026069]
Rps21	A_51_P489959	36.861	1.558	Mus musculus ribosomal protein S21 (Rps21), mRNA [NM_025587]
NAP100007-001	A_52_P375351	31.064	1.545	Unknown
Rps24	A_51_P312936	44.485	1.524	Mus musculus ribosomal protein S24 (Rps24), transcript variant 2, mRNA [NM_207634]
Rpl26	A_51_P363515	45.745	1.467	Mus musculus ribosomal protein L26 (Rpl26), mRNA [NM_009080]

Gene	Probe ID	J5	FC	annotation
Rpl18a	A_51_P446229	42.91	1.442	Mus musculus Ribosomal protein L18A (Rpl18a), mRNA [NM_029751]

Table S2. Genes underexpressed in E47 deficient versus wild type HSCs**Primary adoptive transfer**

Gene	Probe ID	J5	FC	annotation
TC1687340	A_52_P135885	-37.348	-10.461	Q96CB9_HUMAN (Q96CB9) NOL1/NOP2/Sun domain family 4 protein, partial (14%) [TC1669140]
NAP112463-1	A_52_P115191	-24.015	-4.036	Unknown
BC071254	A_51_P249259	-42.344	-3.585	Mus musculus cDNA clone IMAGE:5010343, partial cds. [BC071254]
AY036118	A_52_P26797	-21.154	-3.179	Mus musculus ETS-related transcription factor ERF (Erf1) mRNA, complete cds. [AY036118]
TC1715318	A_52_P315423	-20.279	-2.894	Unknown
1700066C05Rik	A_51_P327577	-20.882	-2.430	Mus musculus adult male testis cDNA, RIKEN full-length enriched library, clone:1700066C05 product:hypothetical protein, full insert sequence. [AK018881]
RP23-64F17.3	A_52_P254667	-23.243	-2.409	Mus musculus similar to bM64F17.3 (putative novel protein) (LOC433728), mRNA [NM_001045534]
LOC671950	A_52_P395962	-24.864	-2.318	predicted gene, OTTMUSG00000005421 [Source:MarkerSymbol;Acc:MGI:3651509] [ENSMUST00000080265]
LOC671950	A_52_P28624	-24.927	-1.689	PREDICTED: Mus musculus hypothetical protein LOC671950 (LOC671950), mRNA [XM_990095]
LOC673433	A_52_P77643	-24.865	-1.673	PREDICTED: Mus musculus hypothetical protein LOC673433 (LOC673433), mRNA [XM_001005577]
Rps12	A_51_P349435	-22.678	-1.619	Mus musculus ribosomal protein S12 (Rps12), mRNA [NM_011295]
NAP115147-1	A_52_P187565	-24.552	-1.595	Unknown
BC115496	A_52_P179599	-57.789	-1.539	Mus musculus cDNA clone IMAGE:40100914. [BC115496]
LOC236598	A_52_P1021744	-47.606	-1.519	Mus musculus 28S ribosomal RNA (LOC236598) [NR_003279]
Ptprz1	A_52_P527944	-67.036	-1.495	Mus musculus mRNA for phosphacan short isoform (RPTP-beta gene). [AJ428208]
Rn18s	A_51_P338803	-60.976	-1.487	Mus musculus 18S RNA (Rn18s) [NR_003278]
D50494	A_51_P199266	-55.603	-1.430	Mus musculus mRNA for RCK, complete cds. [D50494]
RP23-64F17.3	A_52_P631726	-20.179	-1.410	Mus musculus similar to bM64F17.3 (putative novel protein) (LOC433728), mRNA [NM_001045534]
Lars2	A_51_P314501	-64.037	-1.398	Mus musculus leucyl-tRNA synthetase, mitochondrial (Lars2), nuclear gene encoding mitochondrial protein, mRNA [NM_153168]
TC1574886	A_52_P135873	-21.616	-1.367	Q66JW8_MOUSE (Q66JW8) LOC434166 protein, partial (73%) [TC1695075]
Rn18s	A_51_P507669	-33.361	-1.365	Mus musculus 18S RNA (Rn18s) [NR_003278]

Secondary adoptive transfer

Gene	Probe ID	J5	FC	annotation
Cbfb	A_52_P586157	-32.993	-43.664	Mus musculus core binding factor beta (Cbfb), mRNA [NM_022309]
Mknk2	A_52_P376135	-35.562	-7.653	Mus musculus MAP kinase-interacting serine/threonine kinase 2 (Mknk2), mRNA [NM_021462]
AK133468	A_52_P208080	-40.834	-2.637	Mus musculus 11 days pregnant adult female ovary and uterus cDNA, RIKEN full-length enriched library, clone:5031401G23 product:unclassifiable, full insert sequence. [AK133468]
BC020078	A_52_P306965	-33.723	-2.312	Mus musculus similar to hypothetical protein MGC37588, mRNA (cDNA clone MGC:28125 IMAGE:3980327), complete cds. [BC020078]
Phxr5	A_52_P447424	-45.871	-1.885	Mus musculus per-hexamer repeat gene 5 (Phxr5), mRNA [NM_008836]
RP23-64F17.3	A_52_P631726	-31.316	-1.869	Mus musculus similar to bM64F17.3 (putative novel protein) (LOC433728), mRNA [NM_001045534]