

Table 1, supplement. Relative macroH2A1 content of housekeeping genes in mouse liver.<sup>1</sup>

Official symbol	Affymetrix Probe Set	Length	MacroH2A1 counts (Raw) <sup>2</sup>	MacroH2A1 (RPKM) <sup>2</sup>	Starting material counts (Raw) <sup>2</sup>	Starting Material (RPKM) <sup>2</sup>	MacroH2A1 content (macroH2A1 vs SM) <sup>2</sup>	stepup (p-value (MacroH2A1 vs SM)) <sup>2</sup>
MT2A	V00594_s_at	951	1	0.084336	1	0.08439	-1.00064	1
FTL (affy - Ft11)	M11147_at	1944	1	0.041257	1	0.041283	-1.00064	1
GPX1	Y00433_at	1066	0	0	1	0.075286	?	0.291999
UBC	M26880_at	4510	2	0.035567	1	0.017795	1.99873	0.625502
RPS29	U14973_at	1464	0	0	1	0.054819	?	0.291999
TMSB10	S54005_s_at	881	0	0	1	0.091095	?	0.291999
ZFP36	M92843_s_at	2446	0	0	1	0.032811	?	0.291999
RPLP1	M17886_at	1229	1	0.065259	1	0.065301	-1.00064	1
RPS28	U58682_at	1472	1	0.054486	2	0.109041	-2.00127	0.625502
RPL28	U14969_at	1584	0	0	2	0.101331	?	0.127102
RPS23	D14530_at	1612	1	0.049754	2	0.099571	-2.00127	0.625502
H3F3B	Z48950_at	2545	3	0.094542	2	0.063068	1.49905	0.716877
COX7C	X16560_at	1999	1	0.040122	2	0.080295	-2.00127	0.625502
RPS15	M32405_at	1684	3	0.14288	2	0.095314	1.49905	0.716877
RPS21	L04483_s_at	1067	0	0	3	0.225645	?	0.0586272
IFITM2	X57351_s_at	1124	1	0.071355	3	0.214202	-3.00191	0.364967
RPS8	X67247_rna1_at	2298	2	0.069803	3	0.104771	-1.50096	0.7168
FTH1	L20941_at	2391	0	0	3	0.100696	?	0.0586272
RPL18	L11566_at	2766	3	0.086989	3	0.087044	-1.00064	1
NFKBIA	M69043_at	3240	4	0.099017	3	0.07431	1.33248	0.766415
NA (affy - Eef1a1)	X03689_s_at	3272	0	0	3	0.073583	?	0.0586272
EEF1A1	J04617_s_at	3272	0	0	3	0.073583	?	0.0586272
RPS11	X06617_at	2003	1	0.040042	3	0.120201	-3.00191	0.364967
CIRBP	D78134_at	3814	3	0.063086	3	0.063126	-1.00064	1
SUI1 (affy - Eif1)	L26247_at	2102	3	0.114467	4	0.15272	-1.33418	0.765849
ATF4	D90209_at	2359	0	0	4	0.136082	?	0.0274223
OAZ1	D78361_at	2636	1	0.030426	4	0.121782	-4.00255	0.209488
PSMB6	D29012_at	2503	3	0.096129	4	0.128253	-1.33418	0.765849
JUND	X56681_s_at	2879	3	0.083574	4	0.111503	-1.33418	0.765849
GPX4	X71973_at	2931	2	0.054728	4	0.109525	-2.00127	0.473502
RPS25	M64716_at	2694	1	0.029771	4	0.11916	-4.00255	0.209488
ACTG1	M19283_at	2796	0	0	4	0.114813	?	0.0274223
H2AFZ	M37583_at	2325	3	0.103488	4	0.138072	-1.33418	0.765849
RPL18A	X80822_at	2723	0	0	4	0.117891	?	0.0274223
RPS26	X69654_at	1978	0	0	5	0.202868	?	0.0130744
RPS2	X17206_at	1865	1	0.043005	5	0.21516	-5.00318	0.117737
RPS6	M77232_rna1_at	3270	1	0.024527	5	0.122713	-5.00318	0.117737
HSPB1	Z23090_at	1646	12	0.584715	6	0.292544	1.99873	0.197144
PIM1	M54915_s_at	4416	3	0.054486	6	0.109041	-2.00127	0.370653
CD63	X62654_rna1_at	2954	19	0.515865	6	0.163009	3.16465	0.012014

RPL10A	U12404_at	2564	1	0.031281	7	0.219104	-7.00446	0.0356613
RPL12	L06505_at	2335	0	0	7	0.240592	?	0.00303752
RPL29	Z49148_s_at	2030	2	0.079018	7	0.27674	-3.50223	0.115913
CSTB	U46692_rna1_at	1954	2	0.082092	7	0.287503	-3.50223	0.115913
NA (affy - Rps27a)	U49869_rna1_at	2200	1	0.036456	7	0.255355	-7.00446	0.0356613
RPS27A	S79522_at	2200	1	0.036456	7	0.255355	-7.00446	0.0356613
PFN1	J03191_at	2803	3	0.08584	7	0.200422	-2.33482	0.249185
RPL13	X64707_at	2892	0	0	7	0.194254	?	0.00303752
JUNB	X51345_at	1808	4	0.177441	7	0.31072	-1.75111	0.424432
RPS18	X69150_at	3644	2	0.044019	7	0.154166	-3.50223	0.115913
CFL1	X95404_at	3578	5	0.112079	7	0.15701	-1.40089	0.626696
DDT	U49785_at	2143	2	0.074852	8	0.299597	-4.00255	0.0689737
TPT1	X16064_at	3047	0	0	8	0.210711	?	0.00148435
UBA52	X56997_rna1_at	2103	4	0.152551	8	0.305295	-2.00127	0.296547
RPL9	U09953_at	3069	6	0.156801	8	0.2092	-1.33418	0.656367
RPL34	L38941_at	3479	1	0.023054	8	0.184546	-8.00509	0.0192898
EEF1B2	X60489_at	2527	1	0.031739	8	0.254071	-8.00509	0.0192898
RPS9	U14971_at	2858	4	0.112251	8	0.224645	-2.00127	0.296547
RPL13A	X56932_at	2961	1	0.027087	8	0.216831	-8.00509	0.0192898
RPL14	D87735_at	3138	3	0.076676	8	0.2046	-2.66836	0.161992
PPIA	X52851_rna1_at	3942	2	0.040692	8	0.162871	-4.00255	0.0689737
DUSP1	X68277_at	2882	1	0.027829	8	0.222775	-8.00509	0.0192898
RPLP0	M17885_at	4262	1	0.018818	8	0.150642	-8.00509	0.0192898
PTMA	M26708_s_at	3964	0	0	8	0.161967	?	0.00148435
REA (affy - Phb2)	U72511_at	4658	3	0.051655	9	0.155065	-3.00191	0.10376
GAPD (Gapdh)	X01677_f_at	3733	1	0.021485	9	0.193488	-9.00573	0.0103816
RPL7A	M36072_at	2506	0	0	9	0.288225	?	0.00072551
RPS16	M60854_at	2011	4	0.15953	9	0.35917	-2.25143	0.204049
IFITM1	J04164_at	1753	28	1.28106	9	0.412031	3.10913	0.00232928
ATP5G3	U09813_at	2846	0	0	10	0.281991	?	0.000356252
AUP1	D25274_at	3031	1	0.026461	10	0.264779	-10.0064	0.00556151
VDUP1 (affy - Txnip)	S73591_at	3902	4	0.082218	10	0.205675	-2.50159	0.135671
RPL7	X57959_at	3111	2	0.051118	10	0.255751	-5.00318	0.0236249
ACTB	M10277_s_at	3610	2	0.044434	10	0.222312	-5.00318	0.0236249
ACTB	X00351_f_at	3610	2	0.044434	10	0.222312	-5.00318	0.0236249
RPS14	M13934_cds2_at	3951	2	0.040599	10	0.203125	-5.00318	0.0236249
PSME1	L07633_at	3035	0	0	10	0.26443	?	0.000356252
RPL19	X63527_at	3784	0	0	11	0.233298	?	0.000174724
GPS2	U28963_at	2401	2	0.066808	11	0.36768	-5.5035	0.0135432
RPS17	M18000_at	2503	1	0.032043	11	0.352697	-11.007	0.00296548
HMG17 (affy - Hmgn2)	X13546_rna1_at	3254	2	0.049295	11	0.271297	-5.5035	0.0135432
RPL31	X15940_at	4059	2	0.039519	11	0.217492	-5.5035	0.0135432
RPL23	X55954_at	4915	3	0.048954	11	0.179613	-3.669	0.0397814
EIF4A2	D30655_at	6655	2	0.024103	12	0.144711	-6.00382	0.007706
GSTP1	M24485_s_at	2503	1	0.032043	12	0.38476	-12.0076	0.0015759

RPL17	X53777_at	2906	0	0	12	0.331402	?	8.62E-05
EIF4A1	D13748_at	5489	6	0.08767	12	0.175452	-2.00127	0.19631
RPL27A	U14968_at	3176	3	0.075759	12	0.303229	-4.00255	0.0241069
RPL8	Z28407_at	2249	2	0.071324	12	0.428214	-6.00382	0.007706
ATP5G1	D13118_at	2840	1	0.028241	12	0.339104	-12.0076	0.0015759
PSMB5	X95586_at	3877	5	0.103435	12	0.248402	-2.40153	0.114198
AGPAT1	U56417_at	4436	4	0.072321	12	0.2171	-3.00191	0.0578155
COX6A1	X15341_at	3303	3	0.072846	13	0.315867	-4.33609	0.0144327
RPL35	U12465_at	3552	7	0.158059	13	0.293724	-1.85833	0.22238
UQCRB	M26730_s_at	4731	3	0.050858	13	0.220526	-4.33609	0.0144327
SNRPD2	U15008_at	2890	0	0	13	0.361007	?	4.26E-05
RPL11	X79234_at	3425	3	0.070251	13	0.304616	-4.33609	0.0144327
SRP14	U07857_at	3855	2	0.04161	13	0.270638	-6.50414	0.00436232
RPS3A	M84711_at	4730	2	0.033913	13	0.220573	-6.50414	0.00436232
COX8 (affy - Cox8a)	J04823_rna1_at	2460	7	0.228221	13	0.424109	-1.85833	0.22238
ALDOA	X12447_at	3949	5	0.101549	13	0.264196	-2.60166	0.0760715
HNRPA1 (Affy - Hnrnpa1)	X12671_rna1_at	4525	1	0.017725	13	0.230565	-13.0083	0.00083418
PFDN5	D89667_at	5375	9	0.134294	13	0.194104	-1.44536	0.456097
DDX5	X15729_s_at	8140	1	0.009853	14	0.13803	-14.0089	0.000438803
PSMB4	D26600_at	2636	2	0.060852	14	0.426238	-7.00446	0.00244495
RPL35A	X52966_at	3676	2	0.043636	14	0.305648	-7.00446	0.00244495
HSPCA (Affy - Hsp90aa1)	X15183_at	5361	2	0.029921	14	0.209581	-7.00446	0.00244495
RPL37A	L06499_at	2553	3	0.094246	14	0.440095	-4.66964	0.00856826
LAMR1 (Affy - Rpsa)	M14199_s_at	4605	1	0.017417	14	0.243988	-14.0089	0.000438803
LAMR1	U43901_rna1_s_at	4605	1	0.017417	14	0.243988	-14.0089	0.000438803
ATP6S14 (affy - ATP6V1F)	D49400_at	2728	4	0.1176	14	0.411863	-3.50223	0.0228392
HYAL2	AJ000099_s_at	3617	2	0.044348	14	0.310634	-7.00446	0.00244495
HMG1 (Affy - Hmgb1)	D63874_at	5811	0	0	14	0.193351	?	2.10E-05
HNRPU (Affy - Rpl24)	D13413_rna1_s_at	5164	1	0.015531	15	0.233117	-15.0096	0.000230139
RPL21	U25789_at	4142	2	0.038727	15	0.290637	-7.50478	0.00136441
RPL3	X73460_at	5627	1	0.014253	15	0.213936	-15.0096	0.000230139
POLR2L	U37690_at	3295	1	0.024341	15	0.365347	-15.0096	0.000230139
SURF1	Z35093_at	3154	4	0.101717	15	0.38168	-3.75239	0.0140983
COX7A2	X15822_at	4614	1	0.017383	15	0.260905	-15.0096	0.000230139
UBCH10 (affy - Ube2c)	U73379_at	2975	22	0.593101	16	0.431621	1.37413	0.390165
MACS (affy - Marcks)	D10522_at	5685	16	0.225727	16	0.22587	-1.00064	1
CES2	Y09616_at	7384	29	0.314992	16	0.173899	1.81135	0.0712883
RPL4	D23660_at	5177	1	0.015492	17	0.263536	-17.0108	6.36E-05
GPS1	U20285_at	4589	5	0.087387	17	0.297304	-3.40217	0.0131378
XBP1	M31627_at	4907	4	0.065379	17	0.278037	-4.25271	0.00523543
HSPCB (Affy - Hsp90ab1)	J04988_at	5485	2	0.029245	17	0.248738	-8.50541	0.000416991
DHPS	U79262_at	3406	5	0.117739	17	0.400566	-3.40217	0.0131378
SEPW1	U67171_at	5165	5	0.077641	17	0.264148	-3.40217	0.0131378

AES	U04241_at	6806	7	0.08249	17	0.200459	-2.43012	0.0543154
FY (Darc)	X85785_rna1_at	1619	12	0.594467	18	0.892268	-1.50096	0.32706
RPL27	L19527_at	3353	0	0	18	0.430833	?	1.28E-06
LAP18 (affy - Stmn1)	M31303_rna1_at	5524	19	0.275863	18	0.26151	1.05488	0.923342
PBP (affy - Pbp1, aka Pebp1)	X75252_at	4915	4	0.065272	19	0.310241	-4.75302	0.00187651
TRAF4	X80200_at	7129	11	0.123753	19	0.213892	-1.72837	0.182629
RPL6	X69391_at	4741	0	0	19	0.321628	?	6.36E-07
NA (affy - Atp5b)	M19483_at	7083	2	0.022647	20	0.226612	-10.0064	6.81E-05
MOV34-34KD (affy - Cops6)	U70735_at	2884	7	0.194669	20	0.55655	-2.85896	0.0161509
BTG2	U72649_at	4292	1	0.018687	20	0.373973	-20.0127	9.03E-06
LGALS1	J04456_at	3742	22	0.471533	20	0.428939	1.0993	0.817964
CD151	D29963_at	4121	13	0.253008	20	0.389491	-1.53944	0.274363
HNRPK (Affy - Hnrnpk)	X72727_at	10567	2	0.01518	20	0.151897	-10.0064	6.81E-05
RPL38	Z26876_at	3790	2	0.042324	20	0.423507	-10.0064	6.81E-05
HNRPF (Affy - Hnrnpf)	L28010_at	8329	3	0.028888	20	0.192711	-6.67091	0.000319139
B2M	S82297_at	5397	3	0.044582	21	0.312274	-7.00446	0.000179997
NA (affy - B2m)	J00105_s_at	5397	3	0.044582	21	0.312274	-7.00446	0.000179997
RPL32	X03342_at	3231	2	0.049646	21	0.521617	-10.5067	3.70E-05
DAZAP2	D31767_at	5101	3	0.047169	21	0.330395	-7.00446	0.000179997
HINT (Affy - Hint1)	U51004_at	4060	3	0.059264	21	0.41511	-7.00446	0.000179997
LDHA	X02152_at	8546	1	0.009385	22	0.2066	-22.014	2.45E-06
CSNK2B	X57152_rna1_s_at	5254	6	0.091591	22	0.336049	-3.669	0.00300671
CSNK2B	M30448_s_at	5254	6	0.091591	22	0.336049	-3.669	0.00300671
RPS7	Z25749_rna1_at	5108	2	0.031403	23	0.361365	-11.5073	1.08E-05
NA (Affy - Nefl)	U57341_r_at	3855	32	0.665762	23	0.478821	1.39042	0.279125
PIN (Affy - Dynll1)	U32944_at	3880	11	0.227381	23	0.475736	-2.09224	0.0533411
RPS24	M31520_rna1_s_at	5467	4	0.058682	23	0.337636	-5.75366	0.000221429
RPS19	M81757_at	5090	6	0.094542	23	0.362643	-3.83577	0.00187481
ATP5A1	D14710_at	9102	7	0.061681	23	0.202797	-3.28781	0.00440235
RPS5	U14970_at	4376	2	0.036656	24	0.440153	-12.0076	5.81E-06
YWHAH	D78577_s_at	9152	7	0.061344	25	0.219227	-3.5737	0.00177056
NDUFA4	U94586_at	7075	2	0.022672	25	0.283585	-12.508	3.13E-06
AAMP	M95627_at	4821	5	0.083181	25	0.416172	-5.00318	0.000247944
SQSTM1	U46751_at	10640	9	0.067841	25	0.188568	-2.77955	0.00806522
MAZ	M94046_at	4344	3	0.055389	25	0.46187	-8.33864	1.76E-05
SSB	X14684_s_at	10286	4	0.031189	26	0.20286	-6.50414	4.23E-05
UQCRH	Y00764_at	8107	8	0.079145	26	0.257385	-3.25207	0.00255774
MGP	X53331_at	3372	32	0.761124	26	0.618807	1.22999	0.49701
RPS10	U14972_at	4815	6	0.099942	26	0.433358	-4.33609	0.000431993
SET	M93651_at	9753	11	0.090458	26	0.213946	-2.36514	0.0186348
C1QBP	M69039_at	5182	5	0.077387	27	0.418154	-5.40344	8.63E-05
GNB2L1	M24194_at	5883	1	0.013633	27	0.368328	-27.0172	9.20E-08
COX4 (Affy - Cox4i1)	U90915_at	5921	3	0.040637	27	0.365964	-9.00573	5.40E-06

MLF2	U57342_at	4761	3	0.050538	27	0.45513	-9.00573	5.40E-06
SOD1	X02317_at	5584	6	0.086179	27	0.38805	-4.50286	0.000262235
PGAM1	J04173_at	6796	3	0.035405	28	0.330654	-9.33928	2.99E-06
FKBP4	M88279_at	8526	12	0.112883	29	0.272975	-2.4182	0.0108908
COX6C	X13238_at	6272	3	0.038363	29	0.371075	-9.67282	1.64E-06
BRD2	S78771_s_at	8366	3	0.028761	29	0.278195	-9.67282	1.64E-06
ILK	U40282_at	6202	6	0.077591	30	0.388203	-5.00318	5.63E-05
CLIC1	U93205_at	8478	11	0.104062	31	0.293453	-2.81998	0.00271262
CST3	M27891_at	3738	3	0.064369	32	0.687037	-10.6735	2.69E-07
VIM	Z19554_s_at	8517	54	0.508511	33	0.310954	1.63532	0.0349234
RPS3	X55715_at	5815	3	0.041378	33	0.455443	-11.007	1.46E-07
NPM1	M23613_at	10547	1	0.007604	34	0.258714	-34.0216	8.89E-10
HSPD1	M22382_at	10100	5	0.039705	34	0.270164	-6.80433	1.86E-06
H3F3A	M11353_at	11037	13	0.094468	35	0.254499	-2.69402	0.00203544
EIF3S5 (Affy - Eif3f)	U94855_at	7529	10	0.106526	36	0.383738	-3.60229	0.000145671
FCGRT	U12255_at	10831	16	0.11848	36	0.266749	-2.25143	0.00780315
FUS	X71428_at	14554	11	0.060618	36	0.198513	-3.27481	0.000327962
QARS	X76013_at	6464	9	0.111669	36	0.446962	-4.00255	5.97E-05
SLC25A3	X60036_at	7387	4	0.04343	37	0.401979	-9.25589	7.37E-08
ATP5G2	X69908_rna1_at	8181	7	0.068625	38	0.372775	-5.43203	2.67E-06
AZF1 (Affy - Atp5o)	S77356_at	6409	6	0.075085	39	0.488364	-6.50414	4.45E-07
TAGLN2	D21261_at	7131	52	0.584852	39	0.438918	1.33248	0.219248
EEF1G	M55409_s_at	11141	11	0.079188	40	0.288141	-3.63868	5.48E-05
Isg20	U88964_at	6163	32	0.416439	40	0.52088	-1.2508	0.40492
GLUL	X59834_at	9771	17	0.139541	40	0.328542	-2.35444	0.00327257
PSMD8	D38047_at	6488	6	0.072857	41	0.498173	-6.83768	1.46E-07
EEF2	X51466_at	5878	32	0.43663	41	0.559788	-1.28207	0.348447
ARL6IP (Affy - Arl6ip1)	D31885_at	10736	9	0.067235	42	0.313961	-4.66964	3.12E-06
NEDD8	D23662_at	9641	5	0.041595	42	0.34962	-8.40535	1.92E-08
SSR2	X74104_at	8744	4	0.03669	44	0.403843	-11.007	1.10E-09
CPT1B	U62317_rna3_at	9459	25	0.211977	45	0.381801	-1.80115	0.0238683
ECHS1	D13900_at	10702	8	0.059954	46	0.344955	-5.75366	1.26E-07
RPA2	J05249_at	10388	8	0.061766	46	0.355382	-5.75366	1.26E-07
GSTTLp28 (Affy - Gsto1)	U90313_at	9801	10	0.081832	48	0.393043	-4.80306	4.36E-07
PABPC1	Z48501_s_at	13316	11	0.066254	48	0.289292	-4.36641	1.22E-06
NA (Affy - Pabpc1)	U68105_s_at	13316	11	0.066254	48	0.289292	-4.36641	1.22E-06
ERH	D85758_at	9840	9	0.073357	48	0.391486	-5.33673	1.43E-07
PSMC1	L02426_at	11035	13	0.094485	49	0.356364	-3.77163	4.91E-06
PSMD2	D78151_at	11762	8	0.054551	49	0.334337	-6.1289	2.49E-08
CCT4	U38846_at	12745	10	0.062929	49	0.30855	-4.90312	2.62E-07
CLU	M63379_at	13064	41	0.25171	49	0.301016	-1.19588	0.461875
CAPN4 (Affy - Capns1)	X04106_at	8108	8	0.079135	50	0.49491	-6.25398	1.45E-08
ENO1	M14328_s_at	11678	9	0.061811	50	0.343614	-5.55909	4.98E-08
G10 (Affy - Bud31)	U11861_at	7679	18	0.188001	51	0.53301	-2.83514	9.42E-05
TEGT (Affy - Tmbim6)	X75861_at	16832	10	0.047649	51	0.243167	-5.10325	9.39E-08

PSMB3	D26598_at	10068	8	0.063729	52	0.414505	-6.50414	4.83E-09
MDH1	D55654_at	15244	13	0.068397	52	0.273762	-4.00255	1.20E-06
HNRPL (Affy - Hnrnpl)	X16135_at	11378	8	0.056392	52	0.366781	-6.50414	4.83E-09
SEC61B	L25085_at	8574	7	0.06548	53	0.496092	-7.57625	6.86E-10
CD164	D14043_at	11544	9	0.062529	54	0.375411	-6.00382	5.87E-09
PSMD7	D50063_at	8103	1	0.009898	54	0.534832	-54.0344	1.41E-15
KIAA0106 (Affy - prdx6)	D14662_at	11056	5	0.036271	54	0.391981	-10.8069	1.55E-11
RER1	AJ001421_at	12187	10	0.065811	54	0.355604	-5.40344	1.97E-08
CALM2	M19311_s_at	13536	14	0.082953	54	0.320164	-3.8596	1.17E-06
TXN Txn1	X77584_at	13040	10	0.061506	54	0.332342	-5.40344	1.97E-08
SCN1B	L10338_s_at	10423	46	0.353963	55	0.423486	-1.19641	0.431025
PRDX1	X67951_at	14403	3	0.016706	56	0.312036	-18.6786	8.22E-14
EIF4G2	U73824_at	15047	7	0.037311	56	0.298681	-8.00509	1.23E-10
UPK1A	AC002115_cds1_at	9644	45	0.374238	57	0.474337	-1.26747	0.288888
KIAA0111 (Affy - Eif4a3)	D21853_at	11682	6	0.041193	58	0.398456	-9.67282	7.89E-12
NACA	X80909_at	13293	5	0.030168	59	0.356204	-11.8075	7.51E-13
ARF4	M36341_at	19063	7	0.029451	62	0.261018	-8.86278	3.82E-12
CD3E	M23323_s_at	10849	160	1.18283	63	0.466037	2.53807	1.14E-10
S100A10	M38591_at	9530	16	0.134654	63	0.530539	-3.94001	1.05E-07
TCFL1 (Affy - Vps72)	D43642_at	12011	13	0.086808	63	0.42095	-4.84924	5.45E-09
BECN1	L38932_at	14002	9	0.051552	63	0.361094	-7.00446	4.17E-11
SON	X63753_at	15496	10	0.051758	63	0.32628	-6.30401	1.58E-10
UBE2D3	U39318_at	28421	8	0.022576	64	0.180722	-8.00509	5.61E-12
NCL	M60858_rna1_at	14738	8	0.043536	65	0.353952	-8.13017	3.16E-12
SNURF	J04615_at	22656	23	0.081421	66	0.233792	-2.87139	6.62E-06
NA (Affy - Rps15a)	X62691_at	11773	9	0.061312	68	0.463544	-7.56037	2.50E-12
HNRPC (Affy - Hnrnpc)	M16342_at	30650	13	0.034018	69	0.180671	-5.31107	2.49E-10
NA (Affy - Vdac2)	L08666_at	14320	10	0.056008	69	0.386701	-6.90439	5.83E-12
ATP5F1	X60221_at	17387	9	0.041516	70	0.323104	-7.78273	8.06E-13
ZNF162 (Affy - Sf1)	L49380_at	14350	11	0.06148	71	0.397078	-6.45866	7.37E-12
GUSB	M15182_at	13809	33	0.191666	72	0.418446	-2.18321	0.000214439
KIAA0063 (Affy - Josd1)	D31884_at	13624	14	0.082417	73	0.430019	-5.2176	9.80E-11
LGALS3	M57710_at	12309	143	0.931765	74	0.482479	1.9312	4.94E-06
NA (Affy - Arf1)	M84332_at	16752	12	0.057452	76	0.364096	-6.33737	1.77E-12
NAP1L1	M86667_at	17529	26	0.118962	79	0.361692	-3.0404	2.70E-07
DCTN-50 (Affy - Dctn2)	U50733_at	15410	10	0.052046	79	0.411428	-7.90503	2.08E-14
PCBP2	X78136_at	29429	16	0.043605	81	0.220892	-5.06572	1.50E-11
DIA1 (Affy - CYB5R3)	M28713_at	18708	29	0.124327	81	0.347478	-2.79488	9.17E-07
ESD	M13450_at	18100	13	0.057605	82	0.363584	-6.31171	2.47E-13
EEF1D	Z21507_at	14542	18	0.099275	82	0.452542	-4.55846	7.58E-11
NSEP1 (Affy - Ybx1)	J03827_at	17188	12	0.055995	83	0.387545	-6.92107	3.77E-14
NDUFV2	M22538_at	22698	19	0.067137	83	0.293468	-4.3712	1.26E-10
LOC55967 (Affy - Ndufa12)	U34343_at	21941	23	0.084075	83	0.303593	-3.61099	4.80E-09
KIAA0253 (Affy - Ncstn)	D87442_at	16737	13	0.062296	85	0.407578	-6.54262	4.80E-14

FNTA	L10413_at	16881	20	0.095022	86	0.408855	-4.30274	7.85E-11
KIAA0164 (Affy - Bclaf1)	D79986_at	30034	6	0.016023	88	0.235147	-14.676	8.95E-20
FUCA1	M29877_at	19576	23	0.094232	88	0.360768	-3.82852	4.91E-10
COMT (Comt1)	Z26491_s_at	19836	15	0.06065	88	0.356039	-5.8704	1.21E-13
ATOX1	U70660_at	14497	25	0.13831	91	0.503771	-3.64232	7.00E-10
DVL3	D86963_at	15125	17	0.090146	91	0.482854	-5.35635	2.68E-13
LAMP1	J04182_at	16205	14	0.06929	91	0.450673	-6.50414	6.69E-15
HE1 (Affy - Npc2)	X67698_at	18555	30	0.129674	92	0.397921	-3.06862	2.19E-08
CD81	M33680_at	15182	29	0.153201	93	0.491613	-3.20894	6.95E-09
YWHAQ	X56468_at	27109	20	0.059171	94	0.278281	-4.70299	1.56E-12
FMOD	U05291_at	10764	153	1.14002	94	0.700848	1.62662	0.000301571
ARHGDI8	L20688_at	18010	162	0.72143	95	0.42333	1.70418	5.23E-05
ARHA (Affy - Rhoa)	L25080_at	31735	13	0.032855	96	0.242774	-7.38932	1.06E-16
PTP4A2	U14603_at	29526	21	0.057044	97	0.263655	-4.62199	9.89E-13
NEDD5 (Affy - Sept2)	D63878_at	30671	20	0.052299	97	0.253813	-4.85309	3.46E-13
SNRP20 (Affy - Snrnp70)	X04654_s_at	19195	25	0.104459	99	0.41392	-3.96252	1.78E-11
CCR9	U45982_at	16248	33	0.162895	99	0.488995	-3.00191	1.03E-08
GNAS1 (Affy - GNAS)	M21142_cds2_s_at	18830	17	0.072409	103	0.438992	-6.06268	4.69E-16
MLN51 (Affy - Casc3)	X80199_at	24001	20	0.066833	104	0.347755	-5.20331	9.77E-15
PSD	X99688_at	15071	218	1.16013	105	0.559135	2.07487	5.82E-10
SF3B2	U41371_at	21534	21	0.078215	106	0.395049	-5.05083	1.07E-14
GDI2	D13988_at	28188	11	0.031298	106	0.301794	-9.6425	1.52E-20
YWHAZ	M86400_at	23476	14	0.046253	110	0.363651	-7.86214	1.63E-19
PSAP	J03077_s_at	24973	19	0.061021	110	0.353502	-5.79316	1.32E-16
SARS	X91257_at	18559	18	0.077788	111	0.479996	-6.17059	2.23E-17
CD34	S53911_at	22473	113	0.403284	111	0.396398	1.01737	0.948223
EIF3S6 (Affy - Eif3e)	U62962_at	32698	17	0.041699	111	0.27244	-6.53357	6.13E-18
KARS	D31890_at	17867	26	0.116712	111	0.498587	-4.27195	1.54E-13
WBSCR1 (Affy - EIF4H)	D26068_at	19454	13	0.053595	111	0.457914	-8.5439	2.02E-20
PTPN6	X62055_at	17993	50	0.222874	115	0.512937	-2.30146	6.35E-07
CCNI	D50310_at	24564	23	0.075097	117	0.382258	-5.09019	3.54E-16
ATIC	D82348_at	22249	38	0.136983	117	0.422032	-3.08091	2.18E-10
EIF3S8 (Affy - EIF3C)	U46025_at	19457	21	0.086564	118	0.486716	-5.62263	2.13E-17
CANX	L10284_at	31718	7	0.0177	120	0.30363	-17.1538	1.39E-27
LDHB	X13794_rna1_at	17696	165	0.747828	122	0.553292	1.3516	0.0170072
ADF (Affy - Dstn)	S65738_at	27994	26	0.074491	122	0.349755	-4.69529	7.10E-16
OS-9 (Affy says OS9)	U41635_at	26902	33	0.098384	130	0.387818	-3.9419	1.31E-14
CAP (Affy - CAP1)	L12168_at	26655	36	0.108322	131	0.394423	-3.64121	1.12E-13
CLTA	M20471_at	20205	12	0.047634	132	0.524306	-11.007	1.56E-26
TCEA1	M81601_at	39580	23	0.046606	132	0.26765	-5.74278	1.44E-19
AARS	D32050_at	22905	14	0.049022	133	0.466005	-9.50605	2.62E-25
FKBP1A	M34539_at	19194	18	0.075214	136	0.568647	-7.56037	2.21E-23
HDAC1	U50079_s_at	26544	24	0.072517	137	0.414213	-5.71197	3.42E-20
ARF3	M74491_at	25494	26	0.081795	137	0.431273	-5.27259	3.54E-19
ATP5C1	D16562_at	24480	22	0.072078	141	0.46225	-6.41317	3.29E-22

SSP29 (Affy - Anp32b)	U70439_s_at	21408	19	0.071182	142	0.532331	-7.47844	3.15E-24
PAX6	M93650_at	20626	217	0.843797	142	0.552513	1.5272	0.000136929
DDB1	U32986_s_at	24198	23	0.076233	146	0.48422	-6.35187	7.92E-23
ARHGAP1	U02570_at	22202	22	0.079474	147	0.531367	-6.68607	1.23E-23
TMP21 (Affy - Tmed10)	U61734_s_at	34105	36	0.08466	148	0.348268	-4.11373	4.45E-17
EPB72 (Affy - STOM)	X85116_rna1_s_at	23021	56	0.1951	148	0.515949	-2.64454	1.45E-10
PSMB2	D26599_at	32074	28	0.070016	150	0.375325	-5.36055	4.16E-21
YWHAB	X57346_at	23392	22	0.075431	151	0.518059	-6.86801	1.36E-24
ARPC2	U50523_at	31665	25	0.063322	154	0.390311	-6.16392	1.35E-23
AP3S1	U91932_at	48911	25	0.040995	157	0.25761	-6.284	2.67E-24
CAPZA1	U56637_at	41722	28	0.053825	159	0.305845	-5.68219	3.77E-23
XPO1	Y08614_at	41558	35	0.067547	161	0.310914	-4.60293	3.12E-20
KPNA4	AB002533_at	54873	41	0.059926	162	0.236933	-3.95373	6.14E-18
MGST2	U77604_at	21484	218	0.813831	165	0.616366	1.32037	0.0106186
CTNNB1	X87838_at	26930	16	0.047652	172	0.51258	-10.7568	6.61E-34
CCND2	D13639_at	25341	240	0.759592	175	0.554222	1.37056	0.00238468
LASP1	X82456_at	39094	53	0.108732	177	0.363356	-3.34175	1.64E-16
COPA	U24105_at	39805	40	0.080596	193	0.389125	-4.82807	6.99E-25
LTA4H	J03459_at	31502	37	0.094201	204	0.519711	-5.51702	8.74E-29
TAX1BP1	U33821_at	53050	37	0.055938	206	0.311639	-5.57111	3.07E-29
WARS	X59892_at	33170	54	0.130569	208	0.503254	-3.8543	3.84E-22
STAT3	L29277_at	52703	41	0.062394	211	0.321304	-5.14962	2.25E-28
ANXA11	L19605_at	44651	60	0.107774	215	0.386435	-3.58562	2.69E-21
TPR	X66397_at	57098	38	0.053377	223	0.313439	-5.87216	1.28E-32
CLTC, CLTCL2 (Affy - Cltc)	D21260_at	62841	29	0.037012	232	0.296288	-8.00509	4.61E-40
PDLIM1	U90878_at	49379	117	0.190036	233	0.378689	-1.99272	9.84E-10
ITGB1	X07979_at	47927	38	0.063591	236	0.395186	-6.21448	1.20E-35
ADPRT (Affy - Parp1)	J03473_at	32281	49	0.121743	261	0.648878	-5.32992	1.25E-35
PSEN1	L76517_at	46638	47	0.080826	278	0.478382	-5.91866	1.54E-40
VIL2 (Ezr)	X51521_at	44651	113	0.202974	282	0.506859	-2.49716	2.05E-17
MLH1	U07418_at	43382	42	0.077648	285	0.527236	-6.79003	5.46E-45
RPN2	Y00282_at	47222	51	0.08662	297	0.504756	-5.82724	8.40E-43
APLP2	L09209_s_at	62260	70	0.090174	301	0.387996	-4.30274	9.88E-35
ANXA2	D00017_at	38104	357	0.751434	311	0.655027	1.14718	0.103877
CAPN2	M23254_at	50226	104	0.166073	316	0.504926	-3.0404	1.74E-25
PTDSS1	D14694_at	64684	76	0.094234	338	0.419362	-4.4502	6.01E-40
GNB1	X04526_at	67909	55	0.064957	363	0.428992	-6.6042	4.54E-56
NDRG1	D87953_at	40325	784	1.55932	373	0.742342	2.10054	2.08E-33
PRSS11 (Affy - Htra1)	D87258_at	49456	1673	2.71313	406	0.658835	4.11807	5.27E-180
CAST	D16217_at	113637	76	0.05364	415	0.293088	-5.464	7.67E-57
RES4-22 (Affy - C4orf8, aka mouse Fam193a)	AB000460_at	65607	49	0.059902	429	0.524779	-8.76068	4.71E-76
MYH9	M31013_at	81528	90	0.088538	465	0.457737	-5.16996	3.87E-61
ABLIM (Affy - Ablim1)	D31883_at	85747	197	0.184264	513	0.48014	-2.60572	9.59E-33



IQGAP1	L33075_at	91750	253	0.221161	545	0.476716	-2.15552	6.56E-25
SPTBN1 (mouse - Spnb2)	M96803_at	91416	77	0.067556	605	0.531132	-7.86214	1.62E-101
RBPMS	D84110_at	125886	177	0.112769	636	0.405461	-3.59551	1.22E-60
PIK4CA (Affy - PI4KA)	L36151_at	125965	175	0.111425	799	0.509057	-4.56862	1.04E-94
NA (Affy - Cox10)	U82010_rna1_at	116845	173	0.118749	804	0.552224	-4.65036	1.14E-96
KIAA0864 (Affy - Mprrip)	D23673_at	118367	166	0.112479	951	0.644792	-5.73256	7.34E-133
NCOR2	U37146_at	162061	256	0.126694	953	0.471937	-3.72503	1.39E-93
ITPK1	U51336_at	136288	271	0.159479	993	0.584738	-3.66654	6.72E-96
NFIB	U85193_at	215137	278	0.103639	1038	0.387215	-3.73619	3.93E-102
KIAA0084 (Affy - Rftn1)	D42043_at	197192	1324	0.538508	1479	0.601933	-1.11778	0.00522762
FYN	M14676_at	195577	1675	0.686895	1492	0.612238	1.12194	0.00205649

### No tags in starting material

RPL41	Z12962_at	1060	1	0.075664	0	0	?	0.291999
APEX	D13370_at	2119	0	0	0	0		1

### X linked

Official symbol	Affymetrix Probe Set	Transcript Length	MacroH2A1 counts (Raw)	MacroH2A1 (RPKM)	Starting material counts (Raw)	Starting Material (RPKM)	MacroH2A1 content (macroH2A1 vs SM)	Stepup (p-value (macroH2A1 vs SM))
UBE1 ( Affy says Uba1)	M58028_at	24760	412	1.33457	155	0.502401	2.65637	4.48E-28
CETN2	X72964_at	4781	73	1.22461	20	0.335723	3.64768	1.49E-08
FLNA	X53416_at	23075	822	2.85709	221	0.768635	3.71709	4.59E-82
PGK1	V00572_at	16577	272	1.316	94	0.455084	2.89178	2.11E-21
GLA	U78027_rna3_at	12838	196	1.22448	75	0.468849	2.61167	7.61E-14
FHL1	U60115_at	61391	1200	1.56772	394	0.515064	3.04375	9.53E-95
USP11	U44839_at	16632	335	1.61545	107	0.516308	3.12885	1.18E-28
DXS1357E, SLC6A8 (Affy - Slc6a8)	U36341_rna1_at	9367	293	2.50877	81	0.693991	3.61498	1.46E-29
NONO	U02493_at	18944	262	1.10923	93	0.393986	2.81541	5.76E-20
ARAF1 (Affy - Araf)	U01337_at	11980	212	1.41929	79	0.529224	2.68184	2.05E-15
MSN	M69066_at	72510	1401	1.54965	464	0.513558	3.01748	4.52E-109
TMSB4X	M17733_at	2126	21	0.792226	11	0.41524	1.90788	0.074929
RPL36A	M15661_at	2408	34	1.13244	11	0.366611	3.08894	0.000449
IRAK1	L76191_at	10005	269	2.15639	88	0.705887	3.05487	1.12E-22
PLP2	L09604_at	3164	32	0.81116	12	0.304379	2.66497	0.002146
SLC25A5	J02683_s_at	3156	40	1.01652	5	0.127146	7.99491	2.63E-08
RPL39	D79205_at	2666	39	1.17327	13	0.391339	2.99809	0.000228
KIA0026 (affy - Morf4l2)	D14812_at	8204	63	0.615897	27	0.264124	2.33185	0.00012

## Removed genes - no clear single mouse homologue or duplicate of gene included in analysis

Official symbol	Affymetrix Probe Set
KIAA0220 (Affy - Npipl3, aka Smg1?)	D86974_at
PTMA	M14483_rna1_s_at
HNRPA1	U00947_s_at
HNRPA1	X04347_s_at
NA	Z70759_at
D6S81E	Z37166_at
NA	X98482_r_at
NA	X83492_at
DXS1357E	X81817_at
SERPINA3	X68733_rna1_at
HLA-E	X56841_at
HLA-DPA1	X03100_cds2_at
HLA-DRA	X00274_at
TUBB	V00599_s_at
TIF1B	U95040_at
OS4	U81556_at
CHI3L2 no clear homologue in mouse	U49835_s_at
ZNF220	U47742_at
MNPEP (no gene found)	U29607_at
NA	U06155_s_at
SERPINB6 (no clear homologue)	S69272_s_at
HLA-A	M94880_f_at
HLA-DQA1	M34996_s_at
HLA-DNA	M31525_at
NA	M13560_s_at
SEZ23A (bad probe)	M11119_at
H2AFO	L19779_at
ZNF91	L11672_at
HLA-DQB1	K02405_f_at
	HG987-HT987_at
	HG821-HT821_at
	HG662-HT662_at
	HG658-HT658_f_at
	HG613-HT613_at
	HG4542-HT4947_at
	HG4541-HT4946_s_at
	HG4319-HT4589_at
	HG4297-HT4567_at
	HG417-HT417_s_at
	HG384-HT384_at

	HG3597-HT3800_f_at
	HG3549-HT3751_at
	HG3514-HT3708_at
	HG33-HT33_at
	HG3364-HT3541_at
NA	HG3214-HT3391_at
	HG311-HT311_at
	HG3076-HT3238_s_at
	HG2917-
	HT3061_f_at
	HG2915-HT3059_f_at
NA	HG2873-HT3017_at
	HG2855-HT2995_at
	HG2815-
	HT4023_s_at
	HG2815-
	HT2931_s_at
	HG2788-HT2896_at
	HG2639-
	HT2735_s_at
	HG2279-HT2375_at
	HG2238-
	HT2321_s_at
	HG2167-HT2237_at
	HG1980-HT2023_at
	HG1862-HT1897_at
	HG1800-HT1823_at
	HG1515-
	HT1515_f_at
	HG1428-
	HT1428_s_at
	HG1322-
	HT5143_s_at
	HG1153-HT1153_at
	HG1102-HT1102_at
HLA-B	D49824_s_at
HIA-A	D32129_f_at
KIAA0102	D14658_at
NPIP (affy says DKFZp547E087, probe not great)	AC002045_xpt2_s_at
SLC25A6 (X-linked, not mapped in mouse)	J03592_at

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<sup>1</sup>Housekeeping gene list is from L.L.Hsiao et. al. *Physiol Genomics*, 2001. 7(2): 97-104. In some cases gene identification was determined from the affymetrix probe set.

<sup>2</sup>Values were calculated using Partek Genomics Suite software.