

Table S9. Sequencing analysis data for the enriched genes in the comparison SN vs blank control for gene sequences uniquely binding the *Mus musculus* reference genome.

id	chr	start	end	gene	logFC	logCPM	FWER
chr10_122678762_122945795	chr10	122678762	122945795	<i>Ppm1h</i>	3,021867878	9,016642224	0,002221176
chr10_127525473_127534559	chr10	127525473	127534559	<i>Nxph4</i>	8,714818747	6,251114639	0,007421448
chr10_42740539_42758660	chr10	42740539	42758660	<i>Gm15199</i>	5,947590086	7,225915611	0,000127542
chr10_60302748_60696490	chr10	60302748	60696490	<i>Cdh23</i>	1,948144631	11,14954224	3,97675E-06
chr10_81292963_81319973	chr10	81292963	81319973	<i>Pip5k1c</i>	4,165660322	7,876645963	0,036704001
chr10_81606270_81620703	chr10	81606270	81620703	<i>BC025920</i>	6,770304422	6,992024552	0,001853612
chr10_81606368_81609791	chr10	81606368	81609791	<i>Gm26896</i>	8,515520383	6,920303216	0,004733443
chr10_93939165_94035817	chr10	93939165	94035817	<i>Vezt</i>	4,455336642	8,093543263	0,001398659
chr11_101367561_101377903	chr11	101367561	101377903	<i>G6pc</i>	11,14270919	5,589509746	0,005467388
chr11_102189620_102194081	chr11	102189620	102194081	<i>G6pc3</i>	-11,03901433	5,591848559	0,013153547
chr11_11557421_11579460	chr11	11557421	11579460	<i>Gm11998</i>	7,91787874	7,207639709	3,94419E-06
chr11_119228572_119265236	chr11	119228572	119265236	<i>Ccdc40</i>	5,502141535	9,373923275	3,0211E-11
chr11_120007313_120047167	chr11	120007313	120047167	<i>AatK</i>	4,116809758	8,43121019	0,000745711
chr11_120064430_120086827	chr11	120064430	120086827	<i>Azi1</i>	6,527221649	7,69616468	2,97035E-05
chr11_20685084_20741589	chr11	20685084	20741589	<i>AfipH</i>	4,036386185	9,021198482	1,45357E-05
chr11_3125904_3131004	chr11	3125904	3131004	<i>Pisd-ps1</i>	11,03437842	7,546045555	1,51647E-11
chr11_3131850_3193463	chr11	3131850	3193463	<i>Sfi1</i>	5,461594399	10,26359019	6,45896E-29
chr11_3142048_3143363	chr11	3142048	3143363	<i>Gm11399</i>	10,01045642	5,885694338	0,00776851
chr11_50174444_50200115	chr11	50174444	50200115	<i>3010026O09Rik</i>	8,4689081	6,155254074	0,000913418
chr11_69183932_69197843	chr11	69183932	69197843	<i>Alox8</i>	7,897638413	6,677223736	0,000610947
chr11_80046493_80080991	chr11	80046493	80080991	<i>Crlf3</i>	7,245023449	6,888126572	9,13013E-05
chr1_180568955_180601253	chr1	180568955	180601253	<i>Parp1</i>	8,081431993	8,142560563	5,82567E-12
chr1_180942344_180975112	chr1	180942344	180975112	<i>Tmem63a</i>	4,635829021	7,817913194	0,009310733
chr11_82942341_82960681	chr11	82942341	82960681	<i>1700003F17Rik</i>	6,98789459	5,885284081	0,02908363
chr1_182954788_182976044	chr1	182954788	182976044	<i>Tlr5</i>	7,089506571	8,029790085	5,17347E-08
chr11_8826708_8973266	chr11	8826708	8973266	<i>Pkd1l1</i>	4,99258433	9,132365413	3,43106E-09
chr12_73584797_73778185	chr12	73584797	73778185	<i>Prkch</i>	3,231444359	8,607248121	0,016002699
chr13_105149352_105271039	chr13	105149352	105271039	<i>Rnf180</i>	4,381884897	8,466768284	3,34239E-05
chr13_119487941_119610458	chr13	119487941	119610458	<i>Gm7120</i>	7,780541523	8,016567803	1,39897E-13
chr13_53109312_53286124	chr13	53109312	53286124	<i>Ror2</i>	3,853383391	9,469311176	1,7036E-08
chr13_64058274_64089201	chr13	64058274	64089201	<i>Hsd17b3</i>	5,728701157	7,280433308	0,000766119
chr13_93674433_93752831	chr13	93674433	93752831	<i>Dmgdh</i>	4,653358324	8,28224771	0,000726287
chr14_19415857_19418930	chr14	19415857	19418930	<i>Gm21738</i>	7,546367454	11,27633001	2,01944E-80
chr14_32408203_32465909	chr14	32408203	32465909	<i>Chat</i>	4,152679748	8,13374732	0,033443779
chr14_44858671_44974944	chr14	44858671	44974944	<i>Gm16976</i>	4,269409076	8,246992418	0,000226064
chr14_64652531_64806296	chr14	64652531	64806296	<i>Kif13b</i>	3,229211226	8,736018234	0,026754231
chr14_66140960_66152948	chr14	66140960	66152948	<i>Chrna2</i>	5,509175364	6,569853936	0,025014668
chr15_4898737_4962203	chr15	4898737	4962203	<i>Mroh2b</i>	4,599687368	7,869412262	0,027491853
chr15_74606029_74636298	chr15	74606029	74636298	<i>Mroh4</i>	5,401858871	8,325299657	3,0263E-08
chr15_83357526_83367282	chr15	83357526	83367282	<i>1700001L05Rik</i>	10,685279	5,616886888	0,016507372
chr16_33829665_33949153	chr16	33829665	33949153	<i>Itgb5</i>	3,40355725	8,709172393	0,023413846
chr17_3076578_3084183	chr17	3076578	3084183	<i>Pisd-ps2</i>	7,210290328	7,019574733	2,48484E-05
chr17_37001163_37010635	chr17	37001163	37010635	<i>Zfp57</i>	10,54784705	5,107017647	0,047349435
chr17_53716509_53733843	chr17	53716509	53733843	<i>4932415M13Rik</i>	11,71032155	6,209777336	5,94833E-05
chr18_10781723_10785883	chr18	10781723	10785883	<i>Gm21747</i>	12,34681532	6,487111346	8,47286E-06
chr18_12599926_12737050	chr18	12599926	12737050	<i>Ttc39c</i>	-3,244562771	8,834381996	0,004261075
chr18_36281097_36301521	chr18	36281097	36301521	<i>Pura</i>	6,962909968	7,754360341	1,13489E-05
chr1_85246851_85255465	chr1	85246851	85255465	<i>Gm16028</i>	11,09060846	5,900021751	0,000890525

chr19_43956307_43986556	chr19_43956307_43986556	<i>Cpn1</i>	5,573481293	6,951906771	0,008338811
chr19_47501033_47537507	chr19_47501033_47537507	<i>Obfc1</i>	4,486536362	7,848776646	0,00181191
chr19_47512982_47516578	chr19_47512982_47516578	<i>Gm19557</i>	12,34043535	7,586933622	2,29441E-07
chr19_5298331_5308738	chr19_5298331_5308738	<i>Gal3st3</i>	5,318040572	6,575480927	0,044557652
chr19_6062821_6068373	chr19_6062821_6068373	<i>Tm7sf2</i>	6,181181526	6,575242584	0,028223583
chr19_7092014_7105729	chr19_7092014_7105729	<i>Flrt1</i>	10,03320356	7,092658857	8,18872E-09
chr19_8591254_8611834	chr19_8591254_8611834	<i>Slc22a8</i>	6,154424168	6,411529411	0,020908666
chr2_172393794_172433757	chr2_172393794_172433757	<i>Cass4</i>	3,789808102	8,481844903	0,000581211
chr2_23068168_23114510	chr2_23068168_23114510	<i>Acbd5</i>	7,091393483	7,014908498	9,15384E-05
chr2_28315016_28324050	chr2_28315016_28324050	<i>Gm13373</i>	11,70127308	6,434235174	3,98433E-05
chr2_84330626_84425411	chr2_84330626_84425411	<i>Calclrl</i>	-5,171987713	6,819864457	0,03594058
chr2_98662237_98664083	chr2_98662237_98664083	<i>Gm10801</i>	6,73632588	10,96506387	3,25817E-60
chr2_98666547_98667301	chr2_98666547_98667301	<i>Gm10800</i>	6,46390988	13,24452273	5,6775E-199
chr3_10417819_10440124	chr3_10417819_10440124	<i>Snx16</i>	4,976827528	7,157372382	0,044991006
chr3_18054325_18057509	chr3_18054325_18057509	<i>Bhlhe22</i>	-11,15937646	5,459748715	0,039286607
chr3_20248264_20275733	chr3_20248264_20275733	<i>Cpb1</i>	5,309179248	8,537871086	9,30293E-08
chr3_30995747_31052741	chr3_30995747_31052741	<i>Prkci</i>	4,796718472	7,56758201	0,00064231
chr3_85574119_85655622	chr3_85574119_85655622	<i>Pet112</i>	5,14664974	7,678997721	0,000470219
chr3_87357881_87371074	chr3_87357881_87371074	<i>Cd5l</i>	12,6803478	7,454408039	4,63159E-13
chr4_107134155_107179116	chr4_107134155_107179116	<i>Tceanc2</i>	5,114040641	9,025613449	4,07866E-09
chr4_108165437_108179308	chr4_108165437_108179308	<i>Echdc2</i>	12,83475508	6,874000412	9,45949E-09
chr4_125490700_125714173	chr4_125490700_125714173	<i>Grik3</i>	3,325940061	9,432653014	3,36928E-05
chr4_134065912_134092504	chr4_134065912_134092504	<i>Aim1l</i>	4,932907253	7,310376945	0,049070619
chr4_136880129_136886187	chr4_136880129_136886187	<i>Clqb</i>	-9,62372559	6,774645443	1,97935E-06
chr4_139653538_139670280	chr4_139653538_139670280	<i>Tas1r2</i>	5,712264735	7,380261261	0,002494452
chr4_147136278_147457019	chr4_147136278_147457019	<i>Gm26624</i>	5,596658334	8,205763331	4,51251E-09
chr4_148558429_148582401	chr4_148558429_148582401	<i>Exosc10</i>	5,651506495	6,810816645	0,00901861
chr4_155260129_155361361	chr4_155260129_155361361	<i>Prkcz</i>	5,36435476	8,936716226	3,35024E-10
chr4_72117142_72200919	chr4_72117142_72200919	<i>Tle1</i>	4,066391059	8,375952259	0,004565679
chr5_114917318_114923277	chr5_114917318_114923277	<i>Gm13822</i>	5,865934452	6,893369327	0,000784734
chr5_120861421_120873512	chr5_120861421_120873512	<i>Oas1h</i>	11,71091706	6,052533243	3,01118E-05
chr5_125277087_125341094	chr5_125277087_125341094	<i>Scarb1</i>	4,759738825	7,372061119	0,023119428
chr5_25759997_25850342	chr5_25759997_25850342	<i>Actr3b</i>	5,704221812	8,292123251	1,22554E-07
chr5_35041553_35048436	chr5_35041553_35048436	<i>Hgfac</i>	6,700607755	6,782447523	0,017940977
chr6_113471427_113483140	chr6_113471427_113483140	<i>Il17rc</i>	6,997670729	6,668080174	0,001306456
chr6_116208033_116262668	chr6_116208033_116262668	<i>Fam21</i>	5,875100794	7,569363118	4,05305E-05
chr6_121838541_121889057	chr6_121838541_121889057	<i>Mug1</i>	5,03100315	7,30234535	0,001791221
chr6_37327255_37442146	chr6_37327255_37442146	<i>Creb3l2</i>	3,377520967	9,073866505	0,016515874
chr6_48130918_48395408	chr6_48130918_48395408	<i>Gm16630</i>	3,658281726	8,110438719	0,016857867
chr6_49036518_49058182	chr6_49036518_49058182	<i>GpnmB</i>	5,492948551	7,934191386	2,87677E-06
chr6_91464276_91473423	chr6_91464276_91473423	<i>Chchd4</i>	6,545174437	7,456994739	0,00176444
chr7_122670492_122769393	chr7_122670492_122769393	<i>Cacng3</i>	3,769514826	8,200921226	0,031470439
chr7_127191660_127196000	chr7_127191660_127196000	<i>Cd2bp2</i>	-4,888420061	7,079640711	0,00923379
chr7_25619414_25625551	chr7_25619414_25625551	<i>Atp5sl</i>	12,44607539	5,642912591	0,003145368
chr7_45976380_46030302	chr7_45976380_46030302	<i>Abcc6</i>	5,095581346	7,25715469	0,027687467
chr7_66390892_66427517	chr7_66390892_66427517	<i>Aldh1a3</i>	4,866812079	8,330230401	5,01933E-05
chr7_80429210_80430740	chr7_80429210_80430740	<i>Gm15544</i>	12,72185126	7,129400261	2,92433E-09
chr7_83584927_83625614	chr7_83584927_83625614	<i>Tmc3</i>	4,86193816	8,932640185	1,42351E-05
chr7_83597048_83631842	chr7_83597048_83631842	<i>Gm16638</i>	4,967137604	8,569070686	0,000120927
chr8_109859984_109868455	chr8_109859984_109868455	<i>Gm17344</i>	8,884146659	5,786345715	0,032711463
chr8_111345135_111393824	chr8_111345135_111393824	<i>Fa2h</i>	6,046422878	7,631259735	6,01945E-05
chr8_122578238_122611487	chr8_122578238_122611487	<i>Galns</i>	5,717186459	7,633220302	0,000107553
chr8_13465374_13494535	chr8_13465374_13494535	<i>Gas6</i>	8,946049906	7,996229119	1,42969E-13

chr8_20267774_20424814	chr8	20267774	20424814	<i>2610005L07Rik</i>	5,977425398	6,842118026	0,001313349
chr8_20292477_20420781	chr8	20292477	20420781	<i>Gm26804</i>	5,437449078	6,638582006	0,039547756
chr8_70302518_70312993	chr8	70302518	70312993	<i>Cope</i>	8,759639297	6,658048523	0,000332194
chr8_71396855_71404772	chr8	71396855	71404772	<i>Babam1</i>	4,924988231	7,272610284	0,004334006
chr8_74590987_74833947	chr8	74590987	74833947	<i>Gm11033</i>	2,914082792	9,263333906	0,010363723
chr8_84990595_85003364	chr8	84990595	85003364	<i>Hook2</i>	5,88758878	6,926564662	0,010979108
chr9_110865711_110880113	chr9	110865711	110880113	<i>Tmie</i>	7,434424585	8,078489759	1,76821E-11
chr9_111439081_111489608	chr9	111439081	111489608	<i>Dclk3</i>	4,418472695	8,131332646	0,000358773
chr9_20468549_20492746	chr9	20468549	20492746	<i>Zfp426</i>	6,8709592	7,334615754	1,0353E-05
chr9_20770050_20815067	chr9	20770050	20815067	<i>Col5a3</i>	5,439785043	8,146594632	5,51004E-06
chr9_3000282_3038313	chr9	3000282	3038313	<i>Gm26870</i>	7,652692948	13,36697924	4,4341E-270
chr9_3000922_3002330	chr9	3000922	3002330	<i>Gm10722</i>	8,158350957	10,20332496	5,01936E-50
chr9_3003346_3006948	chr9	3003346	3006948	<i>Gm11168</i>	7,577367218	10,43059198	1,23587E-50
chr9_3015654_3017210	chr9	3015654	3017210	<i>Gm10720</i>	11,16908851	6,926367318	2,13503E-08
chr9_3017408_3021593	chr9	3017408	3021593	<i>Gm10719</i>	7,330335759	9,192448379	2,07774E-24
chr9_3023547_3025218	chr9	3023547	3025218	<i>Gm10718</i>	6,774808275	10,98695999	2,76481E-58
chr9_3025417_3033289	chr9	3025417	3033289	<i>Gm10717</i>	8,332025627	10,91265059	1,25301E-75
chr9_3034599_3035805	chr9	3034599	3035805	<i>Gm17535</i>	12,48411074	8,413677184	1,48102E-23
chr9_3036877_3038316	chr9	3036877	3038316	<i>Gm10715</i>	11,03249816	6,896222485	5,43135E-08
chr9_56135885_56161070	chr9	56135885	56161070	<i>Tspan3</i>	6,461323641	7,744852074	1,99372E-08
chrX_133891068_133898429	chrX	133891068	133898429	<i>Tspan6</i>	-7,474031354	6,553125517	0,019045655
chrX_38013173_38018815	chrX	38013173	38018815	<i>4930525M21Rik</i>	11,00951128	5,77509237	0,011027024
chrX_38013908_38018815	chrX	38013908	38018815	<i>4930525M21RIK</i>	11,01227313	5,770080356	0,011225712