

Table 3. *Cis*-Regulated Genes in DBA blocks of C57BLKS/J

Genbank ID	Gene Symbol	Full Gene Name	Correlated Phenotype Code (See - Supp.Table 5)	Gene Location bp	Morgan Location	eQTL Location	Lod	r ²
Chromosome 1: 32.4 Mb to 72.3 Mb								
214854	Lincr	lung-inducible neuralized-related C3HC4 RING domain protein		36,965,152	0.120	35,852,951	17.1	0.527
108991	1700001A24Rik	RIKEN cDNA 1700001A24 gene	28, 30	38,115,236	0.129	37,452,965	7.6	0.232
22592	Ercc5	excision repair cross-complementing rodent repair deficiency, complementation group 5		45,050,855	0.249	52,560,431	6.7	0.296
227059	Slc39a10	solute carrier family 39 (zinc transporter), member 10		47,896,973	0.289	57,596,253	4.3	0.389
56363	Tmeff2	transmembrane protein with EGF-like and two follistatin-like domains 2	18, 25	52,090,466	0.209	47,524,609	4.7	0.220
71724	Aox 3	Aldehyde Oxidase 3	6, 18	59,646,711	0.229	50,042,520	30.2	0.832
71407	5230400C17Rik	RIKEN cDNA 5230400C17 gene		66,881,227	0.407	72,702,447	15.9	0.349
66646	Rpe	ribulose-5-phosphate-3-epimerase		68,278,842	0.289	57,596,253	11.8	0.462
75742	6820402A03Rik	RIKEN cDNA 6820402A03 gene		68,371,594	0.309	60,114,164	4.5	0.196
68691	1110028C15Rik	RIKEN cDNA 1110028C15 gene		68,375,269	0.349	65,149,986	10.6	0.321
AW047739		UI-M-BH1-alk-b-03-0-UI.s1 NIH_BMAP_M_S2 Mus musculus cDNA clone		68,378,858	0.329	62,632,075	5.9	0.240
14768	Lanc1	LanC (bacterial lantibiotic synthetase component C)-like 1	2, 10	68,584,791	0.367	67,466,963	4.6	0.143
BE993185		UI-M-BZ1-bjo-f-01-0-UI.s1 NIH_BMAP_MHI2_S1 Mus musculus cDNA clone	3, 4, 5, 14, 17, 25, 27, 28, 31	69,627,504	0.329	62,632,075	4.7	0.194
Chromosome 3: 99.7-124.3 Mb								
68161	A930005H10Rik	RIKEN cDNA A930005H10 gene		119,218,706	0.526	120,858,760	5.2	0.205
77559	Agl	amylase-1,6-glucosidase, 4-alpha-glucanotransferase		120,075,293	0.506	116,523,599	27.9	0.770
Chromosome 3: 133.5-142.1 Mb								
66357	2310008M10Rik	RIKEN cDNA 2310008M10 gene	13	134,305,000	0.684	139,377,840	9.1	0.292
73284	Ddit4l	DNA-damage-inducible transcript 4-like		141,548,960	0.684	139,377,840	9.9	0.262
68369	0610031O16Rik	RIKEN cDNA 0610031O16 gene		142,135,173	0.684	139,377,840	13.5	0.441
Chromosome 5: 3.6-23.2 Mb								
13121	Cyp51	cytochrome P450, 51		4,095,450	0.147	15,565,460	16.1	0.444
20349	Sema3e	sema domain, immunoglobulin domain (Ig), short basic domain, secreted, (semaphorin) 3E		12,634,678	0.207	24,773,111	18.0	0.445
212167	A530088I07Rik	RIKEN cDNA A530088I07 gene		19,283,591	0.187	21,703,894	23.9	0.666
22791	Dnajc2	DnaJ (Hsp40) homolog, subfamily C, member 2		19,858,266	0.147	15,565,460	6.3	0.201
66587	Fastk	Fas-activated serine/threonine kinase		22,598,211	0.207	24,773,111	21.0	0.589
64295	2010004O20Rik	RIKEN cDNA 2010004O20 gene		22,602,635	0.207	24,773,111	10.6	0.491
69959	2810013C04Rik	RIKEN cDNA 2810013C04 gene	13	22,752,981	0.147	15,565,460	5.5	0.215
269633	2810046M22Rik	RIKEN cDNA 2810046M22 gene		22,868,018	0.120	17,327,972	21.0	0.585
Chromosome 6: 116.1-150.5 Mb								
68465	D6Ucla1e	DNA segment, Chr 6, University of California at Los Angeles-1, expressed		121,013,016	0.494	117,578,538	6.6	0.200
22419	Wnt5b	wingless-related MMTV integration site 5B		121,090,232	0.534	124,163,740	8.5	0.260
17000	Ltbr	lymphotoxin B receptor		127,249,033	0.574	130,748,943	4.9	0.189
72440	5930416I19Rik	RIKEN cDNA 5930416I19 gene		130,302,391	0.631	138,862,497	11.8	0.361
16638	Klra7	killer cell lectin-like receptor, subfamily A, member 7		132,211,147	0.611	136,899,460	9.6	0.319
66441	2010012C16Rik	RIKEN cDNA 2010012C16 gene	10, 22	132,903,136	0.594	134,041,544	12.8	0.346

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381820	2700089E24Rik	RIKEN cDNA 2700089E24 gene		134,525,672	0.611	136,899,460	11.7	0.338
73661	2210419D22Rik	RIKEN cDNA 2210419D22 gene		135,851,694	0.594	134,041,544	12.3	0.359
16974	Lrp6	low density lipoprotein receptor-related protein 6	4, 17, 20, 25	135,855,415	0.594	134,041,544	28.2	0.607
67774	Loh12cr1	RIKEN cDNA 5830457J20 gene		136,042,183	0.594	134,041,544	22.0	0.555
70686	Dusp16	dual specificity phosphatase 16		136,117,206	0.611	136,899,460	35.6	0.730
14760	Gpr19	G protein-coupled receptor 19		136,271,540	0.611	136,899,460	12.7	0.395
74525	8430419L09Rik	RIKEN cDNA 8430419L09 gene		136,605,974	0.631	138,862,497	5.2	0.182
76012	5830415B17Rik	RIKEN cDNA 5830415B17 gene		137,994,361	0.654	141,129,806	7.4	0.224
72488	2610204M12Rik	RIKEN cDNA 2610204M12 gene		138,050,400	0.631	138,862,497	9.1	0.273
78600	Pde6h	phosphodiesterase 6H, cGMP-specific, cone, gamma		138,394,008	0.631	138,862,497	6.7	0.184
18705	Pik3c2g	phosphatidylinositol 3-kinase, C2 domain containing, gamma polypeptide	13, 15	141,038,165	0.651	140,825,535	21.1	0.568
71323	5133400D11Rik	RIKEN cDNA 5133400D11 gene		147,364,264	0.719	147,471,812	12.5	0.402
67623	Tm7sf3	transmembrane 7 superfamily member 3	8, 10, 20	148,125,106	0.719	147,471,812	23.2	0.588
232533	Stk38l	serine/threonine kinase 38 like	17	148,294,011	0.719	147,471,812	7.8	0.198
66184	1110033J19Rik	RIKEN cDNA 1110033J19 gene		149,867,701	0.694	145,055,881	12.3	0.362
Chromosome 7: 103.1-137.2 Mb								
70349	Copb1	coatomer protein complex, subunit beta 1		106,136,942	0.672	105,612,812	9.4	0.310
BE994641		UI-M-BZ1-bjw-g-08-0-UI.s1 NIH_BMAP_MHI2_S1 Mus musculus cDNA clone		108,175,561	0.712	110,395,495	5.0	0.161
18704	Pik3c2a	phosphatidylinositol 3-kinase, C2 domain containing, alpha polypeptide		108,382,549	0.712	110,395,495	7.0	0.229
54208	Arl6ip1	ADP-ribosylation factor-like 6 interacting protein 1	3, 4, 5, 7, 13, 14, 17, 19, 26, 27, 31	110,053,765	0.776	113,775,240	8.2	0.253
233789	2610207I05Rik	RIKEN cDNA 2610207I05 gene	10, 16, 24	110,066,324	0.753	111,762,992	5.2	0.162
74424	Tmc5	transmembrane channel-like gene family 5		110,659,132	0.712	110,395,495	11.8	0.370
71830	1700007B13Rik	RIKEN cDNA 1700007B13 gene	16	111,466,930	0.753	111,762,992	11.8	0.338
233802	Thumpd1	THUMP domain containing 1	12, 22	111,695,443	0.733	111,096,201	23.6	0.599
233806	8430420C20Rik	RIKEN cDNA 8430420C20 gene		112,082,725	0.756	111,894,555	8.8	0.249
12971	Crym	crystallin, mu	13	112,215,775	0.733	111,096,201	55.9	0.915
12176	Bnip3	BCL2/adenovirus E1B 19kDa-interacting protein 1, NIP3		130,789,828	0.931	128,359,953	6.6	0.202
Chromosome 8: 57.0-84.8 Mb								
72281	Sh2d4a	RIKEN cDNA 2210402M20 gene		68,281,999	0.120	64,814,639	23.9	0.608
70885	4921521J11Rik	RIKEN cDNA 4921521J11 gene	19	68,795,338	0.167	74,188,285	18.2	0.549
234358	D10627	cDNA sequence D10627		69,336,498	0.140	69,926,227	26.6	0.469
66869	1200003I07Rik	RIKEN cDNA 1200003I07 gene		69,890,743	0.147	71,613,052	17.1	0.443
53978	Edg4	endothelial differentiation, lysophosphatidic acid G-protein-coupled receptor 4		70,018,562	0.147	71,613,052	13.0	0.330
80720	Pbx4	pre-B-cell leukemia transcription factor 4		70,028,754	0.147	71,613,052	24.1	0.624
234366	BC031407	cDNA sequence BC031407	7, 19	70,108,764	0.147	71,613,052	8.4	0.280
BE984996		UI-M-CG0p-bdg-b-05-0-UI.s1 NIH_BMAP_Ret4_S2 Mus musculus cDNA clone	7	70,342,954	0.140	69,926,227	7.7	0.267
19704	Rent1	regulator of nonsense transcripts 1	7	70,529,415	0.120	64,814,639	10.4	0.386

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66462	2810428115Rik	RIKEN cDNA 2810428115 gene	15	70,771,401	0.120	64,814,639	11.8	0.344
50783	Lsm4	LSM4 homolog, U6 small nuclear RNA associated (<i>S. cerevisiae</i>)	6, 10, 18, 22	70,941,644	0.147	71,613,052	9.0	0.257
110385	Pde4c	phosphodiesterase 4C, cAMP specific	15	71,018,900	0.100	59,703,050	7.5	0.290
77090	9430098E02Rik	RIKEN cDNA 9430098E02 gene	13	71,696,823	0.120	64,814,639	36.8	0.849
234407	Git25d1	glycosyltransferase 25 domain containing 1	7, 19	71,948,367	0.120	64,814,639	7.5	0.256
73695	2410078G03Rik	RIKEN cDNA 2410078G03 gene	1, 15	72,045,393	0.167	74,188,285	5.7	0.197
16453	Jak3	Janus kinase 3		72,063,386	0.147	71,613,052	6.2	0.196
170938	Zfp617	zinc finger protein 617		72,319,073	0.147	71,613,052	5.9	0.201
326618	Tpm4	tropomyosin 4		72,550,464	0.167	74,188,285	5.4	0.201
17274	Rab8a	RAB8A, member RAS oncogene family		72,576,489	0.147	71,613,052	13.0	0.360
67922	2510049119Rik	RIKEN cDNA 2510049119 gene		72,642,093	0.167	74,188,285	5.3	0.221
56367	Scoc	short coiled-coil protein	7	84,364,127	0.187	76,763,519	6.4	0.226
Chromosome 9: 115.8-126.5 Mb								
56693	Crtap	cartilage associated protein	20, 21, 23	116,758,246	0.852	122,116,668	6.0	0.184
BB466497		RIKEN cDNA clone D230009F11	2, 3, 4, 5, 14, 16, 22, 27, 30, 31	122,506,067	0.792	118,814,571	5.7	0.259
67115	Rpl14	ribosomal protein L14		122,954,697	0.852	122,116,668	39.6	0.788
Chromosome 11: 62.0-76.0 Mb								
14457	Gas7	growth arrest specific 7		66,999,284	0.347	79,241,794	4.7	0.141
83431	Ndel1	nuclear distribution gene E-like homolog 1 (<i>A. nidulans</i>)		68,392,715	0.200	61,060,311	7.4	0.255
68964	1500010J02Rik	RIKEN cDNA 1500010J02 gene	8, 9, 11, 21, 23	68,606,878	0.287	71,843,633	6.4	0.250
69215	Sat2	spermidine/spermine N1-acetyl transferase 2		69,193,319	0.287	71,843,633	41.6	0.704
24070	Mpdu1	mannose-P-dolichol utilization defect 1	20	69,227,971	0.287	71,843,633	10.2	0.347
BF464122		UI-M-CG0p-bnx-a-05-0-UI.s1 NIH_BMAP_Ret4_S2 Mus musculus cDNA clone		69,241,138	0.240	66,063,286	7.6	0.295
80886	Senp3	SUMO/sentrin specific protease 3	13, 18	69,244,385	0.267	69,377,580	8.0	0.249
77757	9230111I22Rik	RIKEN cDNA 9230111I22 gene	2, 3, 5, 12, 14, 15, 16, 17, 24, 25, 26, 27, 28, 29, 31	69,337,261	0.267	69,377,580	8.3	0.240
11890	Asgr2	asialoglycoprotein receptor 2	2, 10, 16	69,663,911	0.260	68,564,774	9.3	0.322
12029	Bcl6b	B-cell CLL/lymphoma 6, member B	12	69,795,395	0.240	66,063,286	4.7	0.147
104457	0610010K14Rik	RIKEN cDNA 0610010K14 gene		69,806,477	0.267	69,377,580	7.5	0.267
52898	D11Bwg0434e	DNA segment, Chr 11, Brigham & Women's Genetics 0434 expressed		69,809,393	0.307	74,309,687	17.4	0.626
66172	1110030J09Rik	RIKEN cDNA 1110030J09 gene		70,023,198	0.267	69,377,580	20.3	0.492
19175	Psmb6	proteasome (prosome, macropain) subunit, beta type 6		70,096,667	0.267	69,377,580	10.8	0.310
70510	Rnf167	ring finger protein 167	1, 6, 7, 8, 9, 11, 12, 14, 15, 16, 20, 21, 23, 24, 29	70,221,404	0.267	69,377,580	9.7	0.303
18643	Pfn1	profilin 1		70,223,116	0.287	71,843,633	29.5	0.736
103712	6330403K07Rik	RIKEN cDNA 6330403K07 gene		70,603,216	0.267	69,377,580	23.4	0.537
67279	3110004H13Rik	RIKEN cDNA 3110004H13 gene		71,782,993	0.267	69,377,580	7.0	0.232

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71522	9030405D14Rik	RIKEN cDNA 9030405D14 gene	10, 22	72,006,793	0.307	74,309,687	18.6	0.573
71495	8430406H22Rik	RIKEN cDNA 8430406H22 gene		72,180,646	0.260	68,564,774	6.4	0.216
18472	Pafah1b1	platelet-activating factor acetylhydrolase, isoform 1b, beta1 subunit	22	74,245,221	0.387	84,173,900	8.0	0.285
18738	Pitpn	phosphatidylinositol transfer protein	2, 16	75,159,374	0.307	74,309,687	19.2	0.538
22627	Ywhae	tyrosine 3-monooxygenase/tryptophan 5-monooxygenase activation protein, epsilon polypeptide		75,304,205	0.267	69,377,580	6.2	0.184
Chromosome 12: 10.4-19.8 Mb								
70619	5730510P18Rik	RIKEN cDNA 5730510P18 gene		13,254,130	0.000	3,520,027	23.8	0.517
14245	Lpin1	lipin 1		16,930,916	0.060	15,536,538	22.3	0.605
50496	E2f6	E2F transcription factor 6		17,204,840	0.020	7,525,531	5.9	0.219
71853	Txndc7	thioredoxin domain containing 7		17,659,137	0.040	11,531,035	12.7	0.439
BE992406		UI-M-BZ1-beg-g-08-0-UI.s1 NIH_BMAP_MHI2_S1 Mus musculus cDNA clone		19,125,145	0.040	11,531,035	7.4	0.308
20135	Rrm2	ribonucleotide reductase M2	6, 8, 9, 18, 22	19,155,671	0.080	19,542,042	13.9	0.495
77480	C330002I19Rik	RIKEN cDNA C330002I19 gene		19,506,771	0.040	11,531,035	13.1	0.449
72877	2900003A17Rik	RIKEN cDNA 2900003A17 gene		19,509,495	0.040	11,531,035	32.5	0.762
15902	Idb2	inhibitor of DNA binding 2		19,542,044	0.040	11,531,035	5.1	0.206
Chromosome 12: 31.2-84.7 Mb								
246196	Zfp277	zinc finger protein 277		35,174,591	0.140	31,558,554	28.5	0.610
BB347868	Dock4	RIKEN cDNA clone B930067K06	6, 18	35,351,646	0.165	36,577,818	8.8	0.258
12632	Cfl2	cofilin 2, muscle	19	50,275,555	0.365	61,347,573	10.3	0.421
73385	1700047I17Rik	RIKEN cDNA 1700047I17 gene		50,466,305	0.265	48,962,695	6.1	0.217
24067	Srp54	signal recognition particle 54		50,505,057	0.225	44,008,745	7.5	0.270
15375	Foxa1	forkhead box A1		52,888,408	0.245	46,485,720	9.5	0.408
AI447953		cDNA clone IMAGE:597371		53,077,036	0.245	46,485,720	5.0	0.221
73815	4930404H11Rik	RIKEN cDNA 4930404H11 gene	7, 19	67,439,117	0.385	63,824,548	26.0	0.606
66272	1810020G14Rik	RIKEN cDNA 1810020G14 gene	7, 19, 28	77,464,123	0.426	68,828,038	6.7	0.215
Chromosome 14: 3.3-27.8 Mb								
67053	Rpp14	ribonuclease P 14kDa subunit (human)	32	3,365,872	0.060	15,467,190	22.0	0.686
68263	Pdhb	pyruvate dehydrogenase (lipoamide) beta	32	3,450,639	0.040	12,951,449	18.0	0.599
71393	Kctd6	potassium channel tetramerisation domain containing 6	15	3,497,821	0.080	17,982,932	7.6	0.260
93732	Acox2	acyl-Coenzyme A oxidase 2, branched chain		3,509,318	0.000	7,919,966	4.6	0.158
59007	Ngly1	N-glycanase 1	2, 4, 5, 8, 9, 11, 12, 14, 16, 20, 21, 23, 24, 28, 29, 30, 31	11,524,171	0.040	12,951,449	6.5	0.232
21974	Top2b	topoisomerase (DNA) II beta		11,705,797	0.000	7,919,966	8.6	0.220
AI987838	Thrb	cDNA clone IMAGE:2182413		13,295,392	0.000	7,919,966	20.2	0.572
69721	Nkiras1	NFKB inhibitor interacting Ras-like protein 1	1, 15, 16, 20, 21, 23,	13,626,744	0.020	10,435,708	16.9	0.497
67725	Nudt13	nudix (nucleoside diphosphate linked moiety X)-type motif 13	2, 12, 24, 28, 30, 31	15,183,774	0.060	15,467,190	5.8	0.251
76633	1700112E06Rik	RIKEN cDNA 1700112E06 gene		17,856,134	0.000	7,919,966	4.7	0.153

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Chromosome 14: 109.1-114.2 Mb								
105559	Mbnl2	muscleblind-like 2	1, 15, 16, 24, 30	113,537,686	0.836	110,438,629	9.3	0.232
Chromosome 17: 7.50 Kb -52.0 Mb								
70544	5730437N04Rik	RIKEN cDNA 5730437N04 gene		3,851,009	0.020	13,252,729	6.2	0.242
66832	Rshl2	radial spokehead-like 2	13	6,754,615	0.060	26,690,997	14.8	0.638
68195	Rnaset2	ribonuclease T2	2	7,332,423	0.020	13,252,729	7.1	0.234
50873	Park2	parkin		10,598,945	0.060	26,690,997	10.5	0.401
67045	Riok2	RIO kinase 2 (yeast)		16,865,631	0.080	33,410,131	8.1	0.324
73706	2410085M17Rik	RIKEN cDNA 2410085M17 gene		16,885,389	0.080	33,410,131	6.2	0.245
73233	3110048L19Rik	RIKEN cDNA 3110048L19 gene		21,479,970	0.060	26,690,997	9.9	0.364
67673	Tceb2	transcription elongation factor B (SIII), polypeptide 2		23,415,750	0.080	33,410,131	12.8	0.412
72016	1600002H07Rik	RIKEN cDNA 1600002H07 gene		23,809,023	0.100	40,129,265	8.2	0.311
67078	1700012G19Rik	RIKEN cDNA 1700012G19 gene		24,064,571	0.100	40,129,265	7.4	0.265
328779		similar to heparan sulphate D-glucosaminyl 3-O-sulfotransferase-3B like		24,352,213	0.080	33,410,131	8.8	0.378
193838		RIKEN cDNA clone:2810013J18; essential meiotic endonuclease 1 homolog (S. pombe)	32	24,486,548	0.100	40,129,265	6.5	0.328
52009	D17Ertd441e	DNA segment, Chr 17, ERATO Doi 441, expressed	32	24,536,573	0.040	19,971,863	6.6	0.268
26373	Clcn7	chloride channel 7	13, 17, 25, 26	24,755,400	0.080	33,410,131	11.6	0.413
75872	4930568E02Rik	RIKEN cDNA 4930568E02 gene		24,778,173	0.020	13,252,729	4.7	0.242
68816	Ppil1	peptidylprolyl isomerase (cyclophilin)-like 1		28,881,765	0.100	40,129,265	18.3	0.641
Chromosome 18: 16.9-25.5 Mb								
75964	5033403J15Rik	RIKEN cDNA 5033403J15 gene		21,120,104	0.000	25,562,196	6.9	0.227
67664	Rnf125	ring finger protein 125		21,268,476	0.000	25,562,196	6.7	0.189
Chromosome 19: 18.4-26.0 Mb								
BB382305	C230018N18Rik	RIKEN cDNA clone C230018N18		22,849,252	0.120	26,363,331	13.2	0.743
70273	2310051E17Rik	RIKEN cDNA 2310051E17 gene	8, 9, 11, 21	23,312,833	0.100	25,110,261	5.0	0.267
72810	2810455D13Rik	RIKEN cDNA 2810455D13 gene		23,870,727	0.020	20,097,982	22.6	0.582
74146	Dock8	dedicator of cytokinesis 8		24,849,477	0.000	18,844,912	4.8	0.169