

Supplementary Table 1. Human depression cohort tissue quality

	# Subjects	Age	post-mortem interval (hrs)	RNA integrity number (RIN)	% Male
Control	6	52.4	19.4	8	83
Depressed (unmedicated and medicated)	10	48.4	17.6	7.9	80
Depressed-unmedicated	5	42.2	17.1	8.2	80
Depressed-medicated	5	54.6	18.2	7.7	80
p-value-unmedicated vs. medicated		NS	NS	NS	
p-value- control vs. depressed		NS	NS	NS	

Supplementary Table 2. Predicted β -catenin target genes with increased β -catenin binding in resilient ChIP-seq

Gene ID	Full Name	Description	Expression in striatum	Citation(s)
RYK	receptor-like tyrosine kinase	Wnt receptor		
NNMT	nicotinamide N-methyltransferase	enzyme in nicotinate and nicotinamide metabolism		
NEUROG3	neurogenin-3	basic helix-loop-helix (bHLH) transcription factor		
PROX1	prospero-homeobox1	transcription factor		
ARNTL	aryl hydrocarbon receptor nuclear translocator-like	basic helix-loop-helix-PAS domain transcription factor, involved in circadian rhythm generation	Yes	Allen Brain Atlas
PREP	prolyl endopeptidase	involved in degradation of peptide hormones and peptidases	Yes	Allen Brain Atlas
CKLF5	chemokine-like factor super family member 5	member of chemokine-like factor gene superfamily	Yes	Allen Brain Atlas
SLC5A1	solute carrier family 5 (sodium/glucose cotransporter), member 1		Yes	Allen Brain Atlas
TPM1	tropomyosin 1	actin binding protein	Yes	Allen Brain Atlas
SYNJ2	synaptojanin 2	synaptic vesicle endocytosis	Yes	Allen Brain Atlas
DICER1	dicer 1	miRNA biogenesis	Yes	Cuellar 2008
LTC4S	leukotriene C4 synthase	inflammatory processes		
CARD14	caspase recruitment domain family, member 14	membrane-associated guanylate kinase family, NF-Kb activation		
S100A2	S100 calcium binding protein A2	tumor suppressor		
ACVRL1	activin A receptor type II-like 1	TGF-beta receptor	Yes	Allen Brain Atlas
ACAT2	acetyl-CoA acetyltransferase 2	cholesteryl ester synthesis		
ABCC6	ATP-binding cassette, sub-family C (CFTR/MRP), member 6	multidrug resistance associated protein		
PCK1	phosphoenolpyruvate carboxykinase 1	glucose metabolism		
SLC7A4	solute carrier family 7, member 4	transport of the cationic amino acids	Yes	Allen Brain Atlas
ANKRD2	ankyrin repeat domain 2	response to stress and hypertrophy		
SNRPA1	small nuclear ribonucleoprotein polypeptide A		Yes	Allen Brain Atlas
FOSB	FBJ murine osteosarcoma viral oncogene homolog B	AP1 transcription factor complex member	Yes	Hope 1994, Chen 1995, Doucet 1996, Zachariou 2006

Supplementary Table 3. Small RNA seq summary

sample	read_counts.mature_miRNA	read_counts.piRNA	read_counts.rRNA	read_counts.tRNA	read_counts.RFam	read_counts.total_reads_17_26nt
GFP_Con_A01	10,777,797	30,936	64,404	5,721	109,036	11,988,540
GFP_Con_A02	8,238,047	25,853	66,780	3,875	73,168	9,228,031
GFP_Con_A03	9,690,475	21,654	57,990	3,656	72,500	10,677,097
GFP_Con_A04	11,535,649	25,321	56,659	5,387	92,783	12,726,174
GFP_Con_A05	13,207,341	41,630	94,587	6,389	139,627	14,666,094
GFP_Con_A06	11,525,476	29,042	77,239	5,470	94,540	12,693,107
GFP_Con_B01	11,736,664	65,241	96,875	8,372	180,742	13,280,977
GFP_Con_B02	9,051,798	51,389	100,447	6,077	122,671	10,321,439
GFP_Con_B03	10,609,173	45,870	82,384	5,300	122,136	11,845,789
GFP_Con_B04	12,582,379	65,884	90,393	8,651	176,055	14,173,213
GFP_Con_B05	14,359,880	91,650	152,551	10,208	236,868	16,272,143
GFP_Con_B06	12,253,199	67,180	115,480	8,185	170,263	13,772,186
GFP_Res_A19	6,432,644	20,680	45,674	3,155	76,958	7,169,522
GFP_Res_A20	11,269,703	32,698	73,720	7,576	100,159	12,476,703
GFP_Res_A21	14,979,292	36,729	76,903	8,718	119,236	16,600,324
GFP_Res_A22	10,301,853	27,530	57,858	5,949	94,457	11,390,217
GFP_Res_A23	9,560,865	21,717	70,164	4,105	82,087	10,535,373
GFP_Res_A24	10,970,253	38,787	117,415	9,152	128,628	12,407,270
GFP_Res_B19	7,041,470	43,029	68,367	4,749	120,581	7,968,185
GFP_Res_B20	12,272,607	55,957	97,038	9,292	142,132	13,690,253
GFP_Res_B21	16,357,775	68,401	107,585	11,617	180,877	18,316,288
GFP_Res_B22	11,239,506	56,795	83,101	8,318	151,426	12,618,685
GFP_Res_B23	10,213,316	56,592	105,758	6,229	154,432	11,496,673
GFP_Res_B24	11,913,401	76,393	167,376	12,883	204,045	13,732,244
GFP_Sus_A14	8,157,744	19,958	42,251	4,544	62,865	9,018,518
GFP_Sus_A15	11,856,681	38,973	102,117	5,273	126,307	13,256,017
GFP_Sus_B14	9,013,197	38,248	58,039	6,058	96,942	10,064,916
GFP_Sus_B15	13,017,331	88,652	157,575	8,264	213,491	14,868,735
CRE_Con_A07	10,569,290	27,003	55,025	4,477	88,944	11,672,420
CRE_Con_A08	14,700,257	41,043	83,136	7,052	106,128	16,143,451
CRE_Con_A09	8,790,069	26,492	70,004	3,356	83,834	9,715,498
CRE_Con_A10	10,189,033	30,714	79,153	4,219	101,724	11,342,112
CRE_Con_A11	9,457,328	28,175	87,233	3,673	114,988	10,603,314
CRE_Con_A12	10,751,542	27,958	84,124	4,179	94,876	11,898,681
CRE_Con_B07	11,476,375	48,444	72,949	6,032	131,001	12,792,368
CRE_Con_B08	15,927,029	67,346	108,447	8,950	148,577	17,624,212
CRE_Con_B09	9,581,322	51,514	94,801	4,962	132,680	10,731,589
CRE_Con_B10	11,040,690	59,759	110,121	6,645	156,721	12,465,818
CRE_Con_B11	10,350,932	77,388	134,601	6,530	224,001	11,946,543
CRE_Con_B12	11,290,699	63,090	119,867	6,206	162,369	12,730,349
CRE_Sus_A27	9,626,690	23,166	81,404	3,449	69,298	10,613,505
CRE_Sus_A28	12,425,504	42,014	135,224	4,640	135,435	13,898,698
CRE_Sus_A29	10,183,812	28,113	73,051	4,735	83,484	11,237,339
CRE_Sus_A30	12,916,356	36,631	101,589	4,743	116,965	14,284,007
CRE_Sus_B27	10,353,679	47,131	109,053	4,811	113,698	11,571,124
CRE_Sus_B28	13,191,822	87,117	196,769	7,598	219,252	15,088,821
CRE_Sus_B29	10,685,118	59,290	111,039	6,733	134,440	11,999,897
CRE_Sus_B30	13,724,882	74,200	139,312	7,025	189,258	15,423,779

Supplementary Table 4. Log 2 fold change of miRNA in social defeat with or without β -catenin deletion

name	GFP sus	GFP res	CRE con	CRE sus
mmu-let-7b-5p	-0.0423	0.1334	-0.0685	-0.4746
mmu-let-7c-1-3p	-0.0490	0.1276	-0.0485	0.2740
mmu-let-7e-3p	-0.2880	-0.2172	0.2769	0.4380
mmu-let-7j	0.1746	-0.0425	-0.1005	0.2258
mmu-let-7k	-0.5435	-0.2254	-0.0191	0.2489
mmu-miR-100-5p	-0.3275	-0.0478	-0.0538	0.1864
mmu-miR-101a-3p	0.1778	-0.1979	0.0572	0.2314
mmu-miR-103-1-5p	0.0148	0.5466	-0.6091	-0.5907
mmu-miR-106a-5p	0.2778	-0.2861	-0.1515	0.0860
mmu-miR-107-5p	-0.2116	0.2117	-0.2934	-0.2340
mmu-miR-10a-3p	0.0795	-0.6833	0.2748	0.8767
mmu-miR-10a-5p	0.5676	-0.2092	-0.5408	0.3855
mmu-miR-10b-5p	-0.7342	-0.0330	-0.1343	-1.3967
mmu-miR-1187	0.2046	0.3075	-0.2942	-0.6506
mmu-miR-1191b-5p	-0.0074	-0.4625	-0.0639	0.0316
mmu-miR-1197-3p	-0.2541	-0.2638	0.6320	0.4078
mmu-miR-1199-5p	0.5890	0.1404	-0.0226	-0.0911
mmu-miR-122-3p	0.0723	-0.1780	-0.2021	-0.6006
mmu-miR-1224-3p	-0.0634	0.2055	0.2121	-0.3310
mmu-miR-1224-5p	0.3593	0.2218	0.0767	-0.3360
mmu-miR-1231-5p	-0.0052	0.2850	-0.0944	-0.5358
mmu-miR-1249-3p	-0.3279	-0.2093	0.1424	0.4612
mmu-miR-1249-5p	0.2123	-0.3522	-0.6610	0.5722
mmu-miR-128-2-5p	0.0723	0.1066	0.1208	-0.2727
mmu-miR-128-3p	-0.3584	-0.0597	-0.0744	-0.3459
mmu-miR-1291	-0.4635	-0.2166	0.6273	0.4204
mmu-miR-129-5p	0.1116	-0.0810	0.1401	0.3231
mmu-miR-1306-3p	0.2549	0.2474	-0.1761	-0.5257
mmu-miR-132-5p	-0.0470	0.1010	-0.2922	-0.5597
mmu-miR-133b-3p	-0.8606	-0.9002	0.2125	0.6030
mmu-miR-134-5p	0.2573	0.0127	0.0670	0.1565
mmu-miR-135a-1-3p	-0.0046	0.2759	0.4568	-0.1297
mmu-miR-135a-2-3p	0.1873	0.3295	0.1255	-0.3168
mmu-miR-135b-3p	0.3857	0.0396	0.3557	-0.2469
mmu-miR-141-3p	-0.3585	0.8991	-0.6958	-2.6923
mmu-miR-142-3p	0.5746	-0.2458	-0.7970	0.2479
mmu-miR-142-5p	0.5108	-0.3600	-0.5555	0.5197
mmu-miR-144-3p	0.3584	0.1964	-0.3689	-0.6133
mmu-miR-144-5p	0.1886	0.1095	-0.1963	-0.4657
mmu-miR-146a-5p	0.2581	-0.2284	-0.6367	0.4467
mmu-miR-147-3p	1.0018	-0.1942	-0.9023	0.0455
mmu-miR-148a-5p	0.3960	-0.0038	-0.1823	-0.0266
mmu-miR-150-5p	-0.4175	-0.0706	0.0534	0.2060
mmu-miR-153-5p	0.0462	0.1762	-0.5236	0.0239
mmu-miR-155-5p	0.7418	-0.2485	-0.9403	0.5972
mmu-miR-15a-3p	0.0811	-0.0308	-0.3618	0.0982
mmu-miR-16-5p	-0.3267	-0.1065	-0.0485	-0.0789
mmu-miR-17-3p	0.4731	0.0582	-0.1878	-0.0902
mmu-miR-181b-1-3p	-0.8942	-0.3846	0.4342	0.6218
mmu-miR-181d-3p	0.3377	0.0281	-0.4452	-0.1357
mmu-miR-181d-5p	0.3516	0.2080	0.0245	-0.3009
mmu-miR-182-5p	-0.5238	0.9668	-0.6348	-2.7409
mmu-miR-183-3p	-0.3198	0.6796	-0.2632	-2.6654
mmu-miR-183-5p	-0.4315	0.9706	-0.7337	-2.7691
mmu-miR-1843b-3p	-0.4998	-0.4002	0.7064	0.2939
mmu-miR-184-3p	-0.3046	-0.0812	-0.1536	-0.3587
mmu-miR-187-5p	0.1196	0.0209	0.1037	0.2951
mmu-miR-188-3p	-0.2123	-0.0081	-0.2574	-0.0053
mmu-miR-18a-3p	0.5164	0.0831	-0.0568	-0.2167
mmu-miR-18a-5p	0.3949	0.0466	-0.2285	0.0052
mmu-miR-190a-3p	-0.4128	-0.3115	0.0561	0.3101

mmu-miR-190b-3p	-0.2260	-0.0433	0.2637	0.6857
mmu-miR-1912-3p	-0.5707	-0.3056	0.5282	0.6060
mmu-miR-1930-5p	-0.4576	0.1378	-0.0713	0.1214
mmu-miR-1934-3p	0.5751	-0.1570	0.2762	0.0747
mmu-miR-1934-5p	0.3563	-0.4591	-0.0930	0.3922
mmu-miR-193a-3p	0.3536	-0.0502	0.0239	0.2705
mmu-miR-193b-3p	-0.1808	-0.2056	-0.0672	0.3777
mmu-miR-1941-3p	-0.4052	-0.4309	0.2264	0.6727
mmu-miR-1941-5p	0.0049	-0.0026	-0.5110	-0.6689
mmu-miR-1943-3p	0.0482	-0.2333	-0.1734	0.4767
mmu-miR-1945	0.8309	0.0253	-0.1553	-0.2687
mmu-miR-1947-5p	0.3935	0.0335	-0.0923	-0.4548
mmu-miR-1955-3p	-0.0774	0.2166	-0.6293	-1.2089
mmu-miR-1957a	0.2649	0.0039	-0.2292	-0.4461
mmu-miR-195a-3p	0.1773	0.0019	-0.0017	-0.4718
mmu-miR-195a-5p	-0.2103	0.0165	0.0469	-0.2838
mmu-miR-1964-5p	0.3956	-0.1673	-0.6428	-0.1390
mmu-miR-1966-3p	-0.4001	0.2161	0.2900	0.0441
mmu-miR-1968-5p	0.5419	0.3154	0.0990	-0.1101
mmu-miR-1981-5p	0.2685	0.1318	0.0271	-0.3791
mmu-miR-1982-3p	-0.3503	0.1906	0.0538	0.1562
mmu-miR-199a-5p	-0.1610	0.1769	-0.2671	-0.4742
mmu-miR-19a-3p	0.3636	-0.0697	-0.1622	0.1558
mmu-miR-200a-3p	-0.4684	0.9169	-0.6757	-2.5999
mmu-miR-200a-5p	-0.5220	0.9272	-0.5856	-2.3648
mmu-miR-200b-3p	-0.6398	0.9143	-0.7255	-2.6524
mmu-miR-200b-5p	-0.3009	0.9174	-0.7069	-2.4654
mmu-miR-200c-3p	-0.5805	0.9058	-0.6837	-2.6914
mmu-miR-201-5p	0.2910	0.0815	-0.4323	-0.2017
mmu-miR-202-5p	-0.0075	0.0071	-0.3177	0.5877
mmu-miR-203-3p	0.6630	0.1195	-0.5161	-0.0840
mmu-miR-203-5p	0.4712	0.2890	-0.8732	-0.1725
mmu-miR-204-3p	0.4383	0.0321	0.0848	0.1239
mmu-miR-205-5p	-0.1281	0.3503	-0.5141	-1.0658
mmu-miR-206-3p	-0.6339	-0.3510	-0.3112	-0.1299
mmu-miR-208b-3p	0.4342	-0.0860	0.3226	0.2809
mmu-miR-20b-5p	0.3801	0.0915	-0.4894	0.0384
mmu-miR-210-5p	-0.2501	-0.6692	0.2309	0.2097
mmu-miR-2137	0.5059	-0.4024	-0.3284	-0.7719
mmu-miR-214-3p	1.0021	0.6875	-0.9687	-1.8572
mmu-miR-214-5p	-0.0651	0.6142	-0.6386	-1.2687
mmu-miR-215-5p	0.1073	-0.2342	-0.1299	0.2796
mmu-miR-216a-5p	0.5502	0.0687	0.2298	0.1979
mmu-miR-216b-5p	0.8262	0.6546	-0.1558	-0.4256
mmu-miR-217-5p	0.4384	0.3914	-0.5089	-0.3623
mmu-miR-219a-5p	-0.0466	-0.2305	-0.2283	0.2536
mmu-miR-21a-3p	0.6084	-0.1010	-0.3597	0.5811
mmu-miR-21a-5p	0.5635	-0.1732	-0.4020	0.2305
mmu-miR-21b	0.0624	-0.1320	-0.4046	0.4290
mmu-miR-21c	0.3660	-0.1974	-0.2830	0.2403
mmu-miR-223-5p	0.4631	0.1276	-0.4899	-0.3855
mmu-miR-224-5p	0.1383	0.5350	-0.3944	-0.9717
mmu-miR-22-5p	-0.2436	-0.0776	-0.1432	-0.1050
mmu-miR-23a-5p	0.2439	0.2048	-0.4728	-0.1270
mmu-miR-24-1-5p	-0.1299	-0.2071	-0.2366	0.0886
mmu-miR-25-5p	-0.4295	0.0019	-0.1852	-0.0555
mmu-miR-26a-1-3p	-0.4740	0.0080	-0.2580	0.0187
mmu-miR-26b-3p	-0.5646	0.0221	0.0223	0.1493
mmu-miR-2861	0.1396	0.3508	-0.1795	0.1162
mmu-miR-28a-3p	0.4725	0.1726	-0.0100	-0.1709
mmu-miR-295-5p	-0.0317	0.0029	-0.5473	-0.1483
mmu-miR-296-5p	0.2657	0.0589	-0.1207	0.1740
mmu-miR-297c-5p	0.2847	-0.1333	-0.1553	0.1579
mmu-miR-298-3p	0.6213	0.3624	-0.1868	0.0555

mmu-miR-29b-1-5p	-0.3416	0.1104	0.0902	0.1134
mmu-miR-29b-3p	0.2300	-0.1148	0.1516	0.1722
mmu-miR-302b-3p	0.1491	0.1066	-0.5272	-0.8275
mmu-miR-302d-3p	-0.4478	-0.1545	-0.1232	-0.5573
mmu-miR-3057-3p	0.1706	0.4010	0.1771	-0.2873
mmu-miR-3059-3p	0.1276	0.1694	0.2826	-0.2444
mmu-miR-3066-3p	-0.3378	-0.6319	0.2039	0.5352
mmu-miR-3067-3p	-0.0349	-0.0575	-0.3555	-0.9225
mmu-miR-3069-3p	-0.0865	-0.3204	-0.2281	0.5624
mmu-miR-3072-3p	0.1296	-0.3621	0.1346	0.4056
mmu-miR-3072-5p	0.0758	-0.2502	-0.0827	0.7860
mmu-miR-3074-5p	0.2729	0.0074	0.1725	0.2649
mmu-miR-3078-5p	-0.1634	-0.2155	0.4210	0.6205
mmu-miR-3080-5p	-0.0216	0.0292	0.5050	0.1492
mmu-miR-3085-3p	-0.4038	-0.0675	0.2829	-0.3055
mmu-miR-3085-5p	0.4502	0.1169	-0.0625	-1.2465
mmu-miR-3088-3p	-0.1256	0.1946	0.1866	0.8133
mmu-miR-3094-3p	0.0095	-0.0348	0.3092	-0.1068
mmu-miR-3097-5p	-0.4688	-0.0836	0.1787	-0.1876
mmu-miR-3098-3p	-0.3700	0.0994	-0.2178	-0.4691
mmu-miR-3098-5p	0.1571	-0.1228	-0.4347	-0.1201
mmu-miR-3099-3p	0.4789	0.2845	-0.0735	-0.1925
mmu-miR-3100-3p	-0.0300	0.4507	-0.1365	-0.1699
mmu-miR-3103-5p	0.4513	-0.1230	0.4544	-0.0392
mmu-miR-3110-5p	-0.3785	-0.6384	0.6849	0.4023
mmu-miR-31-3p	-0.5092	-0.2527	0.1584	0.2733
mmu-miR-32-3p	-0.3090	0.1686	-0.5113	-0.4703
mmu-miR-326-5p	0.6873	-0.2033	0.1840	0.0960
mmu-miR-329-3p	-0.4676	-0.0300	-0.0750	0.0012
mmu-miR-340-3p	-0.0385	0.0988	-0.1520	-0.4448
mmu-miR-340-5p	-0.0055	0.0212	-0.1032	-0.5298
mmu-miR-341-5p	0.4536	-0.1196	-0.0975	0.3492
mmu-miR-342-5p	0.2232	0.1629	-0.1509	-0.3983
mmu-miR-344-3p	0.3450	0.0310	0.0817	0.1622
mmu-miR-344-5p	0.2168	0.1501	0.1188	0.3909
mmu-miR-344b-3p	0.1063	-0.1944	0.2059	0.3970
mmu-miR-344d-1-5p	-0.4460	-0.2206	0.0450	0.2902
mmu-miR-344f-3p	0.5799	0.0906	0.0942	-0.1534
mmu-miR-344f-5p	0.7428	0.1045	0.0864	0.0343
mmu-miR-344g-3p	0.2177	-0.1706	0.1366	0.1057
mmu-miR-344g-5p	0.4649	0.1216	-0.0895	0.1766
mmu-miR-344h-3p	0.4708	0.1320	-0.1397	-0.4353
mmu-miR-345-3p	0.2547	0.0724	0.1191	-0.2265
mmu-miR-3470a	0.5462	0.3755	-0.5070	-0.0773
mmu-miR-3472	0.1766	-0.1225	-0.5047	-0.3458
mmu-miR-3473a	-0.1256	-0.0027	-0.0753	-0.2834
mmu-miR-3473g	0.5107	-0.0943	0.3611	0.1086
mmu-miR-3475-3p	0.0040	0.3110	-0.0349	-0.4449
mmu-miR-34b-3p	-0.2954	-0.1415	-0.1300	0.4958
mmu-miR-34b-5p	-0.0884	-0.1657	-0.0529	0.4689
mmu-miR-34c-3p	-0.1885	-0.2358	-0.4197	0.4270
mmu-miR-34c-5p	-0.2108	-0.1745	0.0534	0.4570
mmu-miR-350-5p	0.3767	-0.0138	-0.0380	-0.0382
mmu-miR-3544-5p	0.1652	0.5352	-0.1864	0.2261
mmu-miR-3547-3p	0.4743	0.3118	-0.0153	0.2377
mmu-miR-3572-3p	-0.3874	0.0828	-0.3379	-0.2785
mmu-miR-363-3p	0.3572	0.2010	-0.3466	0.1593
mmu-miR-363-5p	-0.1386	0.2636	-0.5893	-0.1077
mmu-miR-365-3p	-0.2430	-0.1515	0.1429	0.3799
mmu-miR-375-3p	0.0428	0.1140	-0.4673	-1.5865
mmu-miR-376c-5p	0.5187	-0.1527	-0.1831	-0.0065
mmu-miR-378b	0.3749	-0.2122	-0.0223	0.1051
mmu-miR-378c	-0.6994	0.1735	-0.1212	0.3129
mmu-miR-378d	0.0516	-0.7212	0.2714	0.7370

mmu-miR-382-3p	0.1887	0.0281	-0.0062	0.3627
mmu-miR-383-3p	-0.2382	-0.2456	0.0862	0.4360
mmu-miR-411-3p	-0.2170	-0.0939	-0.1557	-0.2419
mmu-miR-412-3p	0.2447	0.5043	-0.1852	0.4511
mmu-miR-429-3p	-0.7180	0.9097	-0.6697	-2.5966
mmu-miR-431-3p	0.2263	-0.0270	0.0355	0.2217
mmu-miR-434-3p	-0.6021	-0.1964	0.2981	0.3522
mmu-miR-448-3p	-0.2039	-0.2946	0.4359	0.4129
mmu-miR-449a-5p	-0.5739	-0.2491	0.0158	0.1697
mmu-miR-449b	-0.8176	-0.5608	0.6143	1.1160
mmu-miR-449c-5p	-0.9139	-0.4546	0.0145	0.2692
mmu-miR-450b-3p	-0.8065	0.0052	0.2154	0.0385
mmu-miR-451a	-0.0494	0.1271	-0.3469	-0.4997
mmu-miR-465b-5p	0.0670	-0.0561	-0.4765	0.0463
mmu-miR-465d-3p	-0.4444	-0.1011	-0.1167	0.1885
mmu-miR-466h-3p	-0.2197	0.2022	-0.2685	-0.5440
mmu-miR-466i-3p	-0.6267	0.1616	0.0726	-0.0799
mmu-miR-466i-5p	-0.0565	0.1631	-0.3672	-0.6466
mmu-miR-466n-5p	0.3467	-0.3279	0.0373	0.2274
mmu-miR-467a-3p	-0.2152	0.1639	-0.6299	0.0229
mmu-miR-467b-5p	-0.3397	0.0549	-0.0305	-0.1516
mmu-miR-467c-3p	-0.5207	-0.2536	0.0021	-0.0974
mmu-miR-467e-3p	-0.3185	0.1668	-0.1831	-0.4926
mmu-miR-467g	-0.1370	-0.2748	-0.2794	-0.1255
mmu-miR-483-5p	0.1256	0.5911	-0.1743	-0.6532
mmu-miR-486-3p	0.0150	0.1187	0.2811	-0.2718
mmu-miR-487b-5p	0.5284	0.6181	-0.7065	-0.4296
mmu-miR-494-3p	-0.3537	0.0139	0.0143	-0.1249
mmu-miR-495-3p	-0.0434	0.0532	-0.2103	-0.4202
mmu-miR-496a-5p	0.1555	0.0601	-0.4943	-0.2057
mmu-miR-497-3p	0.2915	-0.1452	-0.2082	-0.5391
mmu-miR-503-3p	-0.4814	-0.1467	0.3465	0.3584
mmu-miR-5099	0.4439	-0.0036	-0.1922	-0.2576
mmu-miR-5103	-0.0049	-0.2369	-0.3524	-0.5635
mmu-miR-5106	-0.6349	-0.4659	-0.3054	-0.4686
mmu-miR-5107-3p	0.4780	-0.1973	-0.5977	0.4554
mmu-miR-5113	-0.3828	-0.1789	-0.1159	-0.3074
mmu-miR-5114	0.9759	-0.1966	-1.0506	-0.0298
mmu-miR-5119	-0.0820	-0.5551	-0.2377	-0.0584
mmu-miR-5124a	-0.0824	-0.7079	0.8209	0.5407
mmu-miR-5126	0.8248	-0.1446	-0.7350	-0.0395
mmu-miR-5129-3p	-0.4759	-0.0272	0.1047	-0.4269
mmu-miR-5130	-0.0331	0.2648	-0.4780	-0.1459
mmu-miR-5134-5p	-0.4658	-0.1377	0.1742	-0.5186
mmu-miR-539-5p	0.0633	0.1982	-0.2221	-0.4774
mmu-miR-540-5p	0.2418	-0.0821	-0.0083	0.2939
mmu-miR-547-3p	0.3865	0.0865	-0.3704	0.0694
mmu-miR-551b-5p	0.1724	0.0358	-0.2509	-0.5341
mmu-miR-5617-3p	-0.4963	-0.4740	0.6475	0.4695
mmu-miR-5621-3p	-0.4354	-0.3713	0.4958	0.5049
mmu-miR-5624-3p	-0.3813	0.1947	-0.0427	-0.0125
mmu-miR-5626-3p	0.6398	0.4594	-0.4640	-0.7949
mmu-miR-5627-3p	0.3377	-0.1733	0.1821	0.6013
mmu-miR-5709-5p	-0.3498	-0.6564	-0.0163	0.0844
mmu-miR-5710	-1.0606	-0.3703	0.4412	-0.0252
mmu-miR-574-5p	-0.0348	-0.0054	-0.1327	-0.4686
mmu-miR-582-3p	0.4420	0.1004	0.0208	0.0026
mmu-miR-592-3p	-0.6279	-0.2318	-0.1267	-0.2782
mmu-miR-592-5p	-0.2741	-0.0648	0.2002	-0.3240
mmu-miR-598-5p	0.3396	-0.1939	-0.3541	-0.4583
mmu-miR-6236	0.4275	0.3190	-0.3294	-0.7513
mmu-miR-6238	0.7544	0.2971	-0.9133	-2.2192
mmu-miR-6240	0.4932	0.1580	-0.8509	-1.2995
mmu-miR-6369	-0.0537	-0.1478	-0.3645	0.0004

mmu-miR-6392-5p	-0.6094	-0.1515	0.5890	-0.0490
mmu-miR-6418-3p	-0.3536	0.0673	-0.1301	0.1725
mmu-miR-652-5p	-0.0490	-0.4919	0.2975	0.4316
mmu-miR-653-3p	0.7046	0.4501	-0.1149	-0.1896
mmu-miR-6538	0.4406	0.5509	-0.1937	0.5467
mmu-miR-664-3p	-0.4707	-0.1105	0.2425	0.2638
mmu-miR-665-5p	-0.4848	-0.1365	-0.1441	-0.0152
mmu-miR-667-3p	-0.1864	0.0315	0.1787	0.4591
mmu-miR-669a-3-3p	-0.0874	0.3274	-0.5035	-0.1828
mmu-miR-669b-3p	-0.3749	-0.7177	0.5418	-0.3274
mmu-miR-669c-3p	0.4613	0.2493	-0.0936	0.1192
mmu-miR-669c-5p	0.0647	0.1950	-0.0195	-0.4446
mmu-miR-669e-3p	-0.0492	0.3511	-0.5959	-0.9763
mmu-miR-669h-3p	0.4736	0.0714	-0.3567	-0.8330
mmu-miR-669h-5p	0.1426	0.2182	0.0670	-0.3947
mmu-miR-669i	0.3018	0.0319	-0.3531	0.4256
mmu-miR-669k-5p	0.1465	0.4170	-0.2154	-0.6538
mmu-miR-669o-5p	-0.3550	0.1185	-0.3084	-0.3804
mmu-miR-670-3p	0.5124	0.1887	-0.1626	-0.0345
mmu-miR-672-3p	-0.3458	0.1613	-0.0901	0.0725
mmu-miR-6769b-3p	0.0072	-0.3780	0.2162	0.4365
mmu-miR-679-3p	0.0470	0.1202	-0.0668	0.3759
mmu-miR-679-5p	-0.0514	0.2146	0.3486	0.0680
mmu-miR-686	-0.2603	-0.4103	0.2491	0.3740
mmu-miR-6896-5p	-0.0122	-0.4847	0.2874	0.2577
mmu-miR-6897-3p	0.6918	0.3462	-0.1034	-0.8114
mmu-miR-6899-3p	0.3067	0.0059	0.0445	-0.3286
mmu-miR-6901-3p	-0.6193	0.1100	0.1130	0.0411
mmu-miR-6902-5p	-0.2322	-0.6615	0.0102	-0.0143
mmu-miR-6903-3p	-0.5569	0.2555	0.0387	-0.1480
mmu-miR-6903-5p	0.6115	0.3398	-0.2119	-0.3605
mmu-miR-6906-5p	0.8159	0.1450	0.1331	-0.4591
mmu-miR-6908-3p	-0.4599	-0.3486	0.4320	0.6330
mmu-miR-6913-3p	-0.5051	0.0398	-0.1909	-0.0768
mmu-miR-6915-3p	-0.6299	0.3932	0.2219	0.3706
mmu-miR-6915-5p	-0.3808	0.2121	-0.2469	0.3894
mmu-miR-6917-3p	-0.3566	-0.4883	-0.1948	0.0758
mmu-miR-6918-5p	0.1900	0.0292	0.3994	-0.1425
mmu-miR-6920-5p	0.5101	-0.1974	0.3216	0.1976
mmu-miR-6921-3p	-0.0618	-0.1021	0.4501	0.1413
mmu-miR-6922-3p	0.6819	0.1740	-0.2611	-0.2758
mmu-miR-6926-3p	-0.2087	0.3810	-0.1078	-0.1143
mmu-miR-6929-3p	-0.4770	-0.2218	-0.0270	-0.1815
mmu-miR-6930-3p	NA	0.3873	-0.3294	NA
mmu-miR-6931-3p	-0.2326	0.1500	0.0783	0.5567
mmu-miR-6933-5p	0.0855	-0.0795	-0.4743	-0.4116
mmu-miR-6934-5p	0.5866	0.2881	-0.3874	-0.0711
mmu-miR-693-5p	0.4372	-0.0578	-0.2372	0.0352
mmu-miR-6937-5p	-0.0787	0.1969	-0.3726	-0.5576
mmu-miR-6940-3p	0.2626	-0.2769	-0.1194	-0.2344
mmu-miR-6941-3p	0.0055	-0.2803	0.0972	-0.3573
mmu-miR-6943-3p	-0.4332	0.1991	0.3140	0.5771
mmu-miR-6948-3p	-0.0450	-0.0290	-0.2063	-0.4125
mmu-miR-6948-5p	-0.1711	-0.2050	0.1238	-0.1983
mmu-miR-6952-5p	0.1982	0.0959	0.0085	-0.7237
mmu-miR-6953-3p	-0.1062	0.3240	-0.0098	0.1890
mmu-miR-6955-5p	0.3824	0.6336	-0.2918	-0.4660
mmu-miR-6957-3p	-0.0300	-0.0501	-0.3076	0.0655
mmu-miR-6959-3p	-0.7106	-0.0263	-0.3181	0.1570
mmu-miR-6959-5p	0.3012	0.4154	-0.0522	-0.1876
mmu-miR-6965-3p	-0.1672	-0.0055	-0.3624	-0.9101
mmu-miR-6966-3p	-0.1499	0.0588	-0.0455	-0.6053
mmu-miR-6967-3p	-0.2161	0.6529	-0.4699	-0.4265
mmu-miR-6970-3p	-0.2741	-0.3995	0.1254	-0.3374

mmu-miR-6971-3p	0.1823	0.1297	-0.3484	0.1200
mmu-miR-6971-5p	0.3311	0.0723	-0.1463	0.2000
mmu-miR-6975-3p	-0.5329	0.2309	-0.0545	0.1514
mmu-miR-6977-3p	-0.1658	0.3004	0.1592	0.0548
mmu-miR-6982-3p	-0.2842	-0.0866	0.1643	0.8127
mmu-miR-6983-3p	0.5410	-0.4949	-0.3406	-0.1202
mmu-miR-698-3p	0.6226	0.5355	-0.2159	-0.1999
mmu-miR-6984-3p	0.2063	0.2308	-0.4954	-0.1027
mmu-miR-6989-3p	-0.2480	0.1253	0.0402	-0.2138
mmu-miR-6990-3p	-0.0234	-0.0208	0.5986	0.3124
mmu-miR-6990-5p	0.2720	0.0451	-0.2724	0.4360
mmu-miR-6994-3p	0.7007	0.1503	-0.4821	-0.6931
mmu-miR-6996-3p	-0.0303	-0.4116	-0.0449	0.3798
mmu-miR-6996-5p	-0.1317	-0.1093	-0.2408	0.4258
mmu-miR-6999-5p	-0.1360	0.5416	0.0657	0.1115
mmu-miR-7000-5p	0.2977	0.0176	0.1029	0.3814
mmu-miR-7002-3p	-0.4599	-0.6594	0.6365	0.3693
mmu-miR-7004-3p	-0.1188	0.0135	-0.4901	0.2673
mmu-miR-7006-3p	-0.1850	0.0334	0.1697	0.5940
mmu-miR-7008-5p	0.0231	0.2156	0.3031	-0.6177
mmu-miR-7010-5p	0.3797	0.3366	0.1819	-0.4834
mmu-miR-7012-3p	0.4637	0.1113	0.1363	-0.0076
mmu-miR-7013-3p	0.4013	0.4324	-0.1607	-0.5196
mmu-miR-7013-5p	0.4256	0.3390	-0.2017	-0.4704
mmu-miR-7015-3p	-0.1714	-0.1601	0.0920	0.4295
mmu-miR-701-5p	0.3502	0.0251	0.0227	-0.0645
mmu-miR-7016-5p	0.9296	0.6015	-0.2034	-0.5258
mmu-miR-7019-3p	-0.3789	0.1802	0.4137	0.1683
mmu-miR-7019-5p	0.3132	0.4055	-0.3977	-0.7061
mmu-miR-7020-5p	-0.1727	0.2509	-0.6254	-0.2789
mmu-miR-7021-5p	0.5216	0.2095	0.2681	-0.5195
mmu-miR-7023-3p	0.3122	0.2263	-0.2392	0.1558
mmu-miR-7024-3p	-0.4345	0.0138	0.1877	0.4880
mmu-miR-7027-3p	-0.3884	0.0309	0.3957	-0.0289
mmu-miR-7029-3p	-0.4150	0.2272	-0.3890	-0.4660
mmu-miR-7030-3p	0.8567	0.3233	-0.1585	-0.4018
mmu-miR-7033-5p	0.2932	0.2014	-0.1783	-0.4619
mmu-miR-7036-3p	-0.1249	-0.4813	0.3254	0.4853
mmu-miR-7038-3p	-0.1820	-0.4675	0.2060	-0.6906
mmu-miR-7038-5p	0.7889	0.4509	-0.0930	-0.2927
mmu-miR-7041-5p	-0.2519	-0.2301	-0.3518	-0.2128
mmu-miR-7042-3p	-0.1953	-0.2572	0.5662	0.5705
mmu-miR-7043-3p	0.3375	0.2536	-0.6017	-0.9640
mmu-miR-7044-3p	-0.1257	0.1756	0.0957	0.2813
mmu-miR-7044-5p	-0.1020	-0.3897	-0.4446	-0.4238
mmu-miR-7052-3p	-0.2436	0.0600	0.5602	0.2579
mmu-miR-7052-5p	-0.6258	-0.0989	0.3926	-0.1113
mmu-miR-7055-3p	-0.1763	-0.4289	-0.0880	-0.1420
mmu-miR-7055-5p	-0.0739	-0.0547	-0.2007	-0.5127
mmu-miR-7056-3p	-0.2123	-0.0215	-0.4628	0.3868
mmu-miR-7056-5p	0.5294	0.4408	-0.4565	-0.3521
mmu-miR-7059-5p	0.1301	-0.0349	0.3294	-0.4198
mmu-miR-7061-5p	0.1567	0.4830	-0.3155	-0.9124
mmu-miR-7063-3p	-0.6331	0.1000	0.1324	-0.0168
mmu-miR-7063-5p	-0.2832	0.1766	0.0221	-0.3192
mmu-miR-7065-3p	0.2488	0.0096	-0.1425	0.1521
mmu-miR-7066-3p	0.1522	0.4941	0.0358	0.2195
mmu-miR-7066-5p	0.9412	0.4609	-0.4578	-0.6362
mmu-miR-7067-3p	-0.6232	-0.1752	0.4065	0.4544
mmu-miR-7068-3p	0.3443	0.1598	0.1204	-0.3012
mmu-miR-7068-5p	-0.8278	-0.3389	0.1316	-0.1966
mmu-miR-7069-3p	-0.6409	-0.0414	0.4159	0.1999
mmu-miR-7073-5p	0.1870	0.3941	-0.3314	-0.7150
mmu-miR-7077-3p	-0.7007	-0.4108	0.2728	0.2861

mmu-miR-7078-5p	0.3144	0.0090	-0.3594	-0.7570
mmu-miR-7080-3p	0.0441	0.4926	-0.1293	-0.6827
mmu-miR-7080-5p	0.3925	0.1437	-0.0618	-0.2132
mmu-miR-7083-5p	0.7577	0.2086	-0.4198	-0.4442
mmu-miR-709	0.1446	0.3173	-0.3592	0.1150
mmu-miR-7117-3p	0.2317	0.0848	0.3474	-0.3565
mmu-miR-7117-5p	0.4704	0.5369	-0.3236	-0.8942
mmu-miR-7118-3p	-0.0867	0.6547	-0.0220	-0.3478
mmu-miR-7212-5p	-0.0067	-0.3445	0.3829	-0.4525
mmu-miR-7213-5p	0.6353	0.2892	-0.2421	-0.4106
mmu-miR-7219-3p	-0.0855	-0.8610	-0.2876	0.9810
mmu-miR-7220-5p	-0.3935	0.0585	-0.2328	-0.2816
mmu-miR-7235-3p	-0.2023	0.3220	0.1590	0.0810
mmu-miR-7236-3p	0.3826	0.1579	0.0967	-0.1502
mmu-miR-758-5p	0.3874	0.0337	0.3411	0.1475
mmu-miR-760-3p	0.4460	0.2136	0.0177	0.0086
mmu-miR-760-5p	0.3639	-0.0670	-0.0226	0.3717
mmu-miR-7647-3p	0.4731	-0.0573	-0.0461	0.5201
mmu-miR-7648-3p	-0.5758	-0.2528	0.2700	0.0315
mmu-miR-7651-5p	0.4261	0.5308	-0.4429	0.0119
mmu-miR-7654-5p	-0.2112	-0.5474	0.2877	0.4495
mmu-miR-7656-5p	0.1683	0.5059	0.1137	-0.0192
mmu-miR-7661-3p	0.1064	-0.4668	0.0858	-0.2044
mmu-miR-7662-3p	0.2198	-0.4080	-0.5270	-0.3947
mmu-miR-7664-5p	-0.6358	-0.2870	0.0323	-0.0891
mmu-miR-7666-5p	-0.0908	-0.1525	-0.2227	0.0917
mmu-miR-7673-5p	0.4328	0.2358	-0.5305	-0.6034
mmu-miR-7688-5p	0.0527	0.1613	0.0875	-0.4744
mmu-miR-7a-2-3p	0.1817	0.2222	0.1806	0.0627
mmu-miR-7b-3p	-0.6719	-0.0569	-0.0597	0.1521
mmu-miR-8097	0.3672	-0.0437	-0.4986	-0.0723
mmu-miR-8103	-0.3580	-0.0434	-0.2334	-0.1500
mmu-miR-8105	0.1927	-0.1355	-0.1926	-0.6959
mmu-miR-8111	-0.4561	0.1094	-0.1579	0.0336
mmu-miR-8117	-0.1647	0.6067	-0.5217	-0.7053
mmu-miR-872-3p	-0.3803	-0.1336	0.2088	0.2732
mmu-miR-874-5p	0.0404	-0.1499	0.1490	0.3411
mmu-miR-877-5p	0.1808	0.1808	-0.1271	-0.3995
mmu-miR-879-5p	0.2341	-0.0065	-0.0463	0.1760
mmu-miR-92a-3p	0.1710	-0.0302	0.2681	0.2274
mmu-miR-92b-3p	0.0647	0.1077	0.1547	0.3737
mmu-miR-96-5p	-0.4238	0.9123	-0.6687	-2.7430
mmu-miR-98-3p	-0.3502	-0.1240	0.1325	0.4043

Supplementary Table 5. Differential miRNA list

name	overlapping groups
mmu-miR-103-1-5p	GFP resilient increase, and Cre control decrease
mmu-miR-7056-5p	GFP resilient increase, and Cre control decrease
mmu-miR-7651-5p	GFP resilient increase, and Cre control decrease
mmu-miR-216b-5p	GFP resilient increase, and Cre susceptible decrease
mmu-miR-483-5p	GFP resilient increase, and Cre susceptible decrease
mmu-miR-669k-5p	GFP resilient increase, and Cre susceptible decrease
mmu-miR-7061-5p	GFP resilient increase, and Cre susceptible decrease
mmu-miR-7080-3p	GFP resilient increase, and Cre susceptible decrease
mmu-miR-7117-5p	GFP resilient increase, and Cre susceptible decrease
mmu-miR-1941-5p	Cre control decrease and Cre susceptible decrease
mmu-miR-1955-3p	Cre control decrease and Cre susceptible decrease
mmu-miR-205-5p	Cre control decrease and Cre susceptible decrease
mmu-miR-302b-3p	Cre control decrease and Cre susceptible decrease
mmu-miR-32-3p	Cre control decrease and Cre susceptible decrease
mmu-miR-375-3p	Cre control decrease and Cre susceptible decrease
mmu-miR-6238	Cre control decrease and Cre susceptible decrease
mmu-miR-6240	Cre control decrease and Cre susceptible decrease
mmu-miR-669e-3p	Cre control decrease and Cre susceptible decrease
mmu-miR-7043-3p	Cre control decrease and Cre susceptible decrease
mmu-miR-214-3p	GFP resilient increase, Cre control decrease, and Cre susceptible decrease
mmu-miR-214-5p	GFP resilient increase, Cre control decrease, and Cre susceptible decrease
mmu-miR-224-5p	GFP resilient increase, Cre control decrease, and Cre susceptible decrease
mmu-miR-487b-5p	GFP resilient increase, Cre control decrease, and Cre susceptible decrease
mmu-miR-7066-5p	GFP resilient increase, Cre control decrease, and Cre susceptible decrease
mmu-miR-8117	GFP resilient increase, Cre control decrease, and Cre susceptible decrease
mmu-miR-3100-3p	GFP resilient increase only
mmu-miR-3544-5p	GFP resilient increase only
mmu-miR-412-3p	GFP resilient increase only
mmu-miR-6538	GFP resilient increase only
mmu-miR-6930-3p	GFP resilient increase only
mmu-miR-6955-5p	GFP resilient increase only
mmu-miR-6959-5p	GFP resilient increase only
mmu-miR-6967-3p	GFP resilient increase only
mmu-miR-698-3p	GFP resilient increase only
mmu-miR-6999-5p	GFP resilient increase only
mmu-miR-7016-5p	GFP resilient increase only
mmu-miR-7118-3p	GFP resilient increase only
mmu-miR-5114	Cre control decrease only
mmu-miR-10a-5p	Cre control decrease only
mmu-miR-1249-5p	Cre control decrease only
mmu-miR-141-3p	Cre control decrease only
mmu-miR-142-3p	Cre control decrease only
mmu-miR-142-5p	Cre control decrease only
mmu-miR-146a-5p	Cre control decrease only
mmu-miR-147-3p	Cre control decrease only
mmu-miR-153-5p	Cre control decrease only

mmu-miR-155-5p	Cre control decrease only
mmu-miR-181d-3p	Cre control decrease only
mmu-miR-182-5p	Cre control decrease only
mmu-miR-183-5p	Cre control decrease only
mmu-miR-1964-5p	Cre control decrease only
mmu-miR-200a-3p	Cre control decrease only
mmu-miR-200a-5p	Cre control decrease only
mmu-miR-200b-3p	Cre control decrease only
mmu-miR-200b-5p	Cre control decrease only
mmu-miR-200c-3p	Cre control decrease only
mmu-miR-201-5p	Cre control decrease only
mmu-miR-203-3p	Cre control decrease only
mmu-miR-203-5p	Cre control decrease only
mmu-miR-20b-5p	Cre control decrease only
mmu-miR-217-5p	Cre control decrease only
mmu-miR-21a-5p	Cre control decrease only
mmu-miR-21b	Cre control decrease only
mmu-miR-223-5p	Cre control decrease only
mmu-miR-23a-5p	Cre control decrease only
mmu-miR-295-5p	Cre control decrease only
mmu-miR-3470a	Cre control decrease only
mmu-miR-3472	Cre control decrease only
mmu-miR-34c-3p	Cre control decrease only
mmu-miR-363-5p	Cre control decrease only
mmu-miR-429-3p	Cre control decrease only
mmu-miR-467a-3p	Cre control decrease only
mmu-miR-496a-5p	Cre control decrease only
mmu-miR-5107-3p	Cre control decrease only
mmu-miR-5126	Cre control decrease only
mmu-miR-5130	Cre control decrease only
mmu-miR-669a-3-3p	Cre control decrease only
mmu-miR-6934-5p	Cre control decrease only
mmu-miR-6984-3p	Cre control decrease only
mmu-miR-7020-5p	Cre control decrease only
mmu-miR-7662-3p	Cre control decrease only
mmu-miR-7673-5p	Cre control decrease only
mmu-miR-8097	Cre control decrease only
mmu-miR-96-5p	Cre control decrease only
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mmu-let-7b-5p	Cre susceptible decrease only
mmu-miR-10b-5p	Cre susceptible decrease only
mmu-miR-1187	Cre susceptible decrease only
mmu-miR-1231-5p	Cre susceptible decrease only
mmu-miR-1306-3p	Cre susceptible decrease only
mmu-miR-132-5p	Cre susceptible decrease only
mmu-miR-144-3p	Cre susceptible decrease only
mmu-miR-144-5p	Cre susceptible decrease only
mmu-miR-1947-5p	Cre susceptible decrease only
mmu-miR-1957a	Cre susceptible decrease only
mmu-miR-195a-3p	Cre susceptible decrease only
mmu-miR-1981-5p	Cre susceptible decrease only

mmu-miR-199a-5p	Cre susceptible decrease only
mmu-miR-2137	Cre susceptible decrease only
mmu-miR-3067-3p	Cre susceptible decrease only
mmu-miR-3085-5p	Cre susceptible decrease only
mmu-miR-340-3p	Cre susceptible decrease only
mmu-miR-340-5p	Cre susceptible decrease only
mmu-miR-342-5p	Cre susceptible decrease only
mmu-miR-344h-3p	Cre susceptible decrease only
mmu-miR-3475-3p	Cre susceptible decrease only
mmu-miR-451a	Cre susceptible decrease only
mmu-miR-466h-3p	Cre susceptible decrease only
mmu-miR-466i-5p	Cre susceptible decrease only
mmu-miR-467e-3p	Cre susceptible decrease only
mmu-miR-495-3p	Cre susceptible decrease only
mmu-miR-497-3p	Cre susceptible decrease only
mmu-miR-5129-3p	Cre susceptible decrease only
mmu-miR-539-5p	Cre susceptible decrease only
mmu-miR-551b-5p	Cre susceptible decrease only
mmu-miR-5626-3p	Cre susceptible decrease only
mmu-miR-574-5p	Cre susceptible decrease only
mmu-miR-598-5p	Cre susceptible decrease only
mmu-miR-6236	Cre susceptible decrease only
mmu-miR-669c-5p	Cre susceptible decrease only
mmu-miR-669h-3p	Cre susceptible decrease only
mmu-miR-669h-5p	Cre susceptible decrease only
mmu-miR-669o-5p	Cre susceptible decrease only
mmu-miR-6897-3p	Cre susceptible decrease only
mmu-miR-6937-5p	Cre susceptible decrease only
mmu-miR-6948-3p	Cre susceptible decrease only
mmu-miR-6952-5p	Cre susceptible decrease only
mmu-miR-6965-3p	Cre susceptible decrease only
mmu-miR-6966-3p	Cre susceptible decrease only
mmu-miR-6994-3p	Cre susceptible decrease only
mmu-miR-7008-5p	Cre susceptible decrease only
mmu-miR-7013-3p	Cre susceptible decrease only
mmu-miR-7013-5p	Cre susceptible decrease only
mmu-miR-7019-5p	Cre susceptible decrease only
mmu-miR-7033-5p	Cre susceptible decrease only
mmu-miR-7038-3p	Cre susceptible decrease only
mmu-miR-7059-5p	Cre susceptible decrease only
mmu-miR-7073-5p	Cre susceptible decrease only
mmu-miR-7078-5p	Cre susceptible decrease only
mmu-miR-7688-5p	Cre susceptible decrease only
mmu-miR-8105	Cre susceptible decrease only
mmu-miR-877-5p	Cre susceptible decrease only

Supplementary Table 6. piRNA analysis

name	GFP control	GFP resilient	GFP susceptible	CRE control	CRE susceptible
piR-16_DQ539904	9839.67	9048.17	10670.25	10862.75	10696.25
piR-24819_DQ557707	5770.83	5183.50	4570.25	5194.75	4616.25
piR-134919_DQ719597	5252.58	5144.17	4834.50	5105.00	5630.00
piR-1330_DQ541218	4474.83	4802.75	4077.25	4520.25	5843.63
piR-22205_DQ555093	3925.00	3590.33	4033.25	3011.33	3943.25
piR-104408_DQ689086	3749.33	3513.25	3696.75	3417.33	3240.38
piR-1889_DQ541777	3381.33	3132.83	3007.75	2983.17	3580.88
piR-137610_DQ722288	2362.50	2213.17	2377.50	2230.25	2071.38
piR-120348_DQ705026	2195.83	2062.25	2740.75	2192.08	2371.38
piR-1741_DQ541629	1011.67	910.42	877.75	972.08	869.88
piR-1078_DQ540966	669.58	609.83	882.00	694.92	1170.25
piR-127318_DQ711996	483.42	496.00	564.00	540.33	563.88
piR-130848_DQ715526	437.25	447.17	543.00	481.00	477.00
piR-119222_DQ703900	407.42	417.08	375.50	425.75	453.38
piR-123453_DQ708131	328.08	325.42	432.75	317.33	343.63
piR-1093_DQ540981	290.92	302.25	240.25	234.00	276.25
piR-17872_DQ549760	240.42	238.58	232.50	210.33	262.50
piR-1801_DQ541689	205.58	174.58	178.25	146.08	174.88
piR-1096_DQ540984	166.42	146.75	141.00	139.17	145.00
piR-515_DQ540403	135.67	160.42	208.00	286.92	647.25
piR-974_DQ540862	115.25	102.25	143.00	117.83	111.00
piR-26424_DQ559312	85.17	85.25	95.75	115.67	168.00
piR-134593_DQ719271	81.25	79.75	59.00	90.25	92.00
piR-112153_DQ696831	77.83	95.58	68.50	90.75	123.75
piR-15293_DQ547181	76.08	203.42	164.75	72.92	56.25
piR-524_DQ540412	51.00	64.00	55.50	57.08	44.63
piR-1963_DQ541851	47.33	48.25	43.75	59.92	91.25
piR-5001_DQ564913	45.92	53.42	63.25	84.00	139.75
piR-13556_DQ545444	40.67	51.25	57.00	45.25	45.00
piR-14718_DQ546606	40.17	36.25	53.75	43.50	80.25
piR-341_DQ540229	37.00	31.92	32.75	39.17	61.13
piR-1056_DQ540944	35.17	32.58	28.25	24.00	30.13
piR-1225_DQ541113	34.92	40.83	49.75	48.00	79.13
piR-638_DQ540526	27.67	37.92	57.75	53.58	117.13
piR-134810_DQ719488	24.42	38.75	28.75	25.75	25.50
piR-1361_DQ541249	23.08	20.58	26.25	22.67	27.25
piR-109755_DQ694433	22.50	21.42	36.50	25.83	26.25
piR-27_DQ539915	22.00	19.33	22.50	18.58	15.00
piR-119101_DQ703779	19.83	21.83	23.50	33.58	31.88
piR-1063_DQ540951	19.00	17.08	16.25	16.08	22.88
piR-29217_DQ562105	17.67	13.42	13.75	15.50	13.13
piR-19737_DQ551625	17.33	19.58	23.75	20.08	19.25
piR-1212_DQ541100	17.33	14.00	31.25	33.17	35.88
piR-26102_DQ558990	17.17	12.17	10.50	34.92	85.13
piR-10908_DQ542796	16.42	16.67	30.25	20.75	35.25
piR-18877_DQ550765	16.17	15.50	14.75	12.33	16.38
piR-1100_DQ540988	15.25	14.50	12.50	13.83	14.63
piR-965_DQ540853	14.83	18.83	14.00	17.25	22.25
piR-2808_DQ552696	13.92	15.83	14.50	16.42	14.88
piR-1088_DQ540976	13.42	16.33	12.25	18.42	29.13
piR-25256_DQ558144	13.17	13.58	15.00	18.33	23.88
piR-13616_DQ545504	12.58	11.33	9.00	8.83	9.50
piR-20430_DQ553318	12.42	14.75	22.75	20.42	29.38

piR-28528_DQ561416	12.00	14.58	12.75	11.33	12.00
piR-801_DQ540689	11.17	12.25	13.75	15.92	23.13
piR-14820_DQ546708	10.75	12.75	17.50	18.25	32.38
piR-25841_DQ558729	10.00	11.50	10.25	7.00	7.88
piR-20521_DQ553409	9.67	10.25	17.50	25.58	46.13
piR-165_DQ540053	9.42	10.25	14.25	13.50	22.75
piR-14661_DQ546549	9.33	14.92	12.50	21.33	34.63
piR-10470_DQ542358	9.17	9.00	17.00	13.25	14.13
piR-28223_DQ561111	8.92	10.08	4.00	9.58	5.25
piR-16295_DQ548183	7.92	16.92	21.25	16.25	34.88
piR-1582_DQ541470	7.83	9.33	14.50	12.08	15.13
piR-137131_DQ721809	7.42	5.17	6.75	5.17	7.13
piR-113704_DQ698382	7.17	7.00	8.25	5.75	3.38
piR-117191_DQ701869	6.92	7.83	7.00	7.00	6.63
piR-19152_DQ551040	6.83	8.33	5.75	4.75	3.88
piR-115623_DQ700301	6.67	8.25	3.75	6.83	7.00
piR-984_DQ540872	6.42	8.17	8.50	11.17	22.50
piR-1918_DQ541806	6.08	6.75	6.75	8.67	8.75
piR-170_DQ540058	5.75	6.50	10.00	10.33	12.88
piR-971_DQ540859	5.42	5.17	4.50	5.58	4.63
piR-4034_DQ563946	5.33	5.50	5.25	10.33	22.50
piR-16250_DQ548138	4.75	4.42	3.25	2.83	2.75
piR-111167_DQ695845	4.33	2.25	4.50	3.92	2.88
piR-1097_DQ540985	4.17	2.92	5.50	3.17	1.75
piR-22995_DQ555883	4.08	4.33	2.75	4.42	5.13
piR-22994_DQ555882	4.00	4.33	4.50	4.92	6.75
piR-121779_DQ706457	3.67	3.17	2.50	3.33	2.00
piR-19153_DQ551041	3.50	2.08	2.00	2.75	2.63
piR-133519_DQ718197	3.50	3.25	3.00	3.50	4.38
piR-8912_DQ568824	3.42	6.42	5.25	4.58	3.88
piR-18370_DQ550258	2.83	3.33	3.50	2.50	3.50
piR-108718_DQ693396	2.75	2.92	2.25	3.17	2.63
piR-11019_DQ542907	2.75	1.83	2.75	3.08	2.50
piR-141161_DQ725839	2.58	3.08	1.75	3.58	3.50
piR-29251_DQ562139	2.58	4.83	5.50	5.00	7.63
piR-1742_DQ541630	2.33	2.17	4.50	4.92	7.25
piR-124682_DQ709360	2.33	2.75	2.00	0.83	0.88
piR-892_DQ540780	1.92	2.67	4.50	4.25	2.38
piR-5246_DQ565158	1.92	2.67	3.50	2.42	1.63
piR-123760_DQ708438	1.83	2.42	1.75	2.33	2.88
piR-38_DQ539926	1.75	3.42	4.00	5.00	9.75
piR-1259_DQ541147	1.67	1.83	1.50	2.17	1.75
piR-532_DQ540420	1.67	0.75	1.25	2.42	0.88
piR-108575_DQ693253	1.58	1.00	1.25	1.67	1.63
piR-9999_DQ569911	1.50	1.50	1.00	1.75	1.25
piR-4846_DQ564758	1.42	1.83	0.25	2.00	1.88
piR-132013_DQ716691	1.25	3.25	3.75	4.50	3.75
piR-122946_DQ707624	1.08	2.50	0.50	1.42	0.63
piR-44_DQ539932	1.08	1.25	0.50	0.83	1.25
piR-972_DQ540860	1.08	1.17	1.25	1.75	1.38
piR-129621_DQ714299	1.08	0.83	0.25	1.50	3.13
piR-124734_DQ709412	1.08	1.42	1.75	1.42	1.25
piR-1722_DQ541610	1.00	0.75	0.25	1.67	1.88
piR-124393_DQ709071	0.92	0.83	0.25	0.92	0.88
piR-106610_DQ691288	0.83	1.50	2.00	2.08	2.25
piR-1075_DQ540963	0.75	0.42	0.25	0.25	0.13

piR-110542_DQ695220	0.75	0.08	0.50	0.25	0.88
piR-114142_DQ698820	0.75	0.17	0.00	0.17	0.00
piR-129153_DQ713831	0.67	1.08	1.00	1.00	1.50
piR-142288_DQ726966	0.58	0.25	0.75	0.33	0.25
piR-122359_DQ707037	0.58	0.42	0.00	1.08	0.75
piR-138557_DQ723235	0.50	0.42	1.25	1.33	1.13
piR-138003_DQ722681	0.50	0.00	0.25	0.33	0.25
piR-118815_DQ703493	0.50	0.67	0.50	0.42	0.88
piR-115999_DQ700677	0.50	0.58	0.50	1.17	0.63
piR-498_DQ540386	0.42	0.92	0.75	0.92	1.50
piR-141064_DQ725742	0.42	0.58	1.00	0.17	0.38
piR-139586_DQ724264	0.33	0.25	0.00	0.42	1.25
piR-104208_DQ688886	0.33	0.08	0.00	0.17	0.25
piR-123597_DQ708275	0.33	0.25	0.00	0.25	1.25
piR-134043_DQ718721	0.25	0.17	0.00	0.33	0.00
piR-122292_DQ706970	0.25	0.00	0.00	0.08	0.25
piR-109800_DQ694478	0.25	0.33	0.75	0.25	0.63
piR-142293_DQ726971	0.17	0.00	0.00	0.67	1.13
piR-126231_DQ710909	0.17	0.08	0.00	0.42	0.75
piR-131787_DQ716465	0.17	0.33	0.50	0.58	1.38
piR-7260_DQ567172	0.17	0.42	0.50	0.33	0.00
piR-18734_DQ550622	0.17	0.25	0.50	0.08	0.13
piR-139362_DQ724040	0.17	0.00	0.50	0.58	0.38
piR-137556_DQ722234	0.17	0.00	0.00	0.17	0.00
piR-132386_DQ717064	0.17	0.08	0.50	0.25	0.00
piR-127863_DQ712541	0.17	0.00	0.00	0.25	0.00
piR-138718_DQ723396	0.17	0.00	0.00	1.08	0.50
piR-138173_DQ722851	0.17	0.25	2.00	0.42	0.50
piR-284_DQ540172	0.17	0.00	0.00	0.17	0.00
piR-114034_DQ698712	0.08	0.00	0.25	0.08	0.13
piR-13800_DQ545688	0.08	0.17	0.75	0.58	0.25
piR-10297_DQ542185	0.08	0.08	0.00	0.17	0.00
piR-17374_DQ549262	0.08	0.00	0.00	0.17	0.13
piR-111521_DQ696199	0.08	0.67	0.00	0.42	0.13
piR-114902_DQ699580	0.08	0.17	0.25	0.08	0.38
piR-133781_DQ718459	0.00	0.00	0.00	0.17	0.00
piR-110680_DQ695358	0.00	0.17	0.50	0.17	0.00
piR-25028_DQ557916	0.00	0.00	0.00	0.17	0.00
piR-23359_DQ556247	0.00	0.00	0.00	0.17	0.13
piR-134739_DQ719417	0.00	0.00	0.00	0.08	0.00
piR-1028_DQ540916	0.00	0.00	0.00	0.17	0.25
piR-135049_DQ719727	0.00	0.00	0.00	0.17	0.00
piR-141306_DQ725984	0.00	0.00	0.00	0.17	0.00
piR-17384_DQ549272	0.00	0.00	0.00	0.17	0.00
piR-126122_DQ710800	0.00	0.00	0.00	0.17	0.00
piR-1430_DQ541318	0.00	0.00	0.00	0.08	0.00
piR-120379_DQ705057	0.00	0.00	0.00	0.17	0.00
piR-109306_DQ693984	0.00	0.00	0.00	0.17	0.00
piR-121286_DQ705964	0.00	0.08	0.00	0.08	0.00
piR-28179_DQ561067	0.00	0.00	0.00	0.17	0.00
piR-109332_DQ694010	0.00	0.17	0.00	0.17	0.13
piR-133950_DQ718628	0.00	0.00	0.00	0.17	0.25
piR-2582_DQ552470	0.00	0.00	0.00	0.17	0.00
piR-22259_DQ555147	0.00	0.00	0.00	0.08	0.00

Supplementary Table 7. Differential piRNA list

piRNA ID	baseMean	log2FoldChange	pvalue	group
piR-15293_DQ547181	127.278	1.058	0.000	GFP res vs GFP con up
piR-132013_DQ716691	2.203	0.851	0.008	GFP res vs GFP con up
piR-16295_DQ548183	10.434	0.677	0.023	GFP res vs GFP con up
piR-122946_DQ707624	1.666	0.693	0.032	GFP res vs GFP con up
piR-111521_DQ696199	0.349	0.619	0.036	GFP res vs GFP con up
piR-29251_DQ562139	3.166	0.597	0.041	GFP res vs GFP con up
piR-138173_DQ722851	0.525	1.381	0.001	GFP sus vs GFP con up
piR-109755_DQ694433	25.762	0.591	0.007	GFP sus vs GFP con up
piR-10908_DQ542796	17.361	0.603	0.011	GFP sus vs GFP con up
piR-132013_DQ716691	1.912	1.024	0.014	GFP sus vs GFP con up
piR-1582_DQ541470	9.209	0.651	0.018	GFP sus vs GFP con up
piR-10470_DQ542358	9.436	0.623	0.020	GFP sus vs GFP con up
piR-110680_DQ695358	0.078	0.546	0.047	GFP sus vs GFP con up
piR-29217_DQ562105	14.884	-0.423	0.013	GFP res vs GFP con dn
piR-110542_DQ695220	0.447	-0.660	0.023	GFP res vs GFP con dn
piR-111167_DQ695845	3.305	-0.709	0.025	GFP res vs GFP con dn
piR-138003_DQ722681	0.226	-0.571	0.028	GFP res vs GFP con dn
piR-114142_DQ698820	0.435	-0.655	0.036	GFP res vs GFP con dn
piR-28223_DQ561111	7.408	-0.964	0.005	GFP sus vs GFP con dn
piR-115623_DQ700301	5.610	-0.782	0.022	GFP sus vs GFP con dn
piR-134593_DQ719271	74.188	-0.434	0.027	GFP sus vs GFP con dn
piR-4846_DQ564758	1.097	-0.907	0.037	GFP sus vs GFP con dn

Supplementary Table 8. Differential Rfam non-coding small RNA analysis

Rfam database ID	baseMean	log2FoldChange	pvalue	group
RF00005;tRNA;AAHY01203330.1/8173-8244	31.469	0.457	0.001	GFP resilient increase
RF00005;tRNA;AAHY01049942.1/76701-76768	2.098	0.871	0.002	GFP resilient increase
RF00005;tRNA;AC117740.12/109103-109033	11.024	0.737	0.004	GFP resilient increase
RF00418;SNORA58;CAAA01007162.1/23611-23476	2.347	0.751	0.006	GFP resilient increase
RF00005;tRNA;AAHY01214783.1/1422-1494	9.408	0.711	0.007	GFP resilient increase
RF00635;HAR1A;AAHY01013429.1/32-166	1.781	0.676	0.015	GFP resilient increase
RF00005;tRNA;AAHY01044463.1/52988-53050	8.247	0.582	0.020	GFP resilient increase
RF00155;SNORA66;AAHY01026490.1/8563-8690	10.056	0.417	0.027	GFP resilient increase
RF00005;tRNA;AC107738.16/7082-7148	13.687	0.503	0.028	GFP resilient increase
RF00005;tRNA;AL845293.5/44481-44543	252.645	0.389	0.033	GFP resilient increase
RF00005;tRNA;AL645470.20/98227-98296	0.880	0.563	0.037	GFP resilient increase
RF00619;U6atac;CAAA01116915.1/19758-19883	1.298	0.565	0.043	GFP resilient increase
RF00302;SNORA65;AAHY01091273.1/81327-81455	4.119	0.493	0.047	GFP resilient increase
RF00005;tRNA;AL603664.16/44902-44970	2.726	0.552	0.047	GFP resilient increase
RF00019;Y_RNA;CAAA01059689.1/54924-54815	5.934	-0.770	0.001	GFP resilient decrease
RF00026;U6;CAAA01014608.1/6466-6564	3.731	-0.766	0.003	GFP resilient decrease
RF00614;SNORA11;AAHY01122478.1/5461-5587	2.154	-0.810	0.003	GFP resilient decrease
RF00017;Metazoa_SRP;AEKR01308876.1/2862-3151	20.854	-0.453	0.004	GFP resilient decrease
RF00019;Y_RNA;AAHY01038354.1/15138-15025	13.124	-0.506	0.007	GFP resilient decrease
RF00156;SNORA70;CAAA01106462.1/6203-6337	13.657	-0.547	0.011	GFP resilient decrease
RF00570;SNORD64;AF357424.1/1-38	5.858	-0.563	0.014	GFP resilient decrease
RF00005;tRNA;AAHY01099763.1/4904-4832	1.176	-0.647	0.020	GFP resilient decrease
RF00005;tRNA;AC163684.5/188432-188360	0.897	-0.613	0.024	GFP resilient decrease
RF00181;SNORD113;CAAA01088149.1/34836-34764	0.897	-0.606	0.027	GFP resilient decrease
RF00005;tRNA;AAHY01085779.1/34674-34606	0.233	-0.429	0.028	GFP resilient decrease
RF00410;SNORA2;AAHY01095829.1/3779-3643	10.041	-0.458	0.028	GFP resilient decrease
RF00005;tRNA;AC124754.5/164270-164338	1.015	-0.581	0.033	GFP resilient decrease
RF00429;SNORA29;CAAA01155162.1/4340-4220	0.831	-0.540	0.040	GFP resilient decrease
RF00017;Metazoa_SRP;AAHY01138882.1/36573-36857	5.688	-0.464	0.041	GFP resilient decrease
RF00049;SNORD36;AEKQ01056909.1/17858-17928	41.517	0.471	0.001	GFP susceptible increase
RF00005;tRNA;AC124828.14/43577-43499	0.275	0.745	0.004	GFP susceptible increase
RF00608;SNORD99;CAAA01052997.1/4014-4087	7856.730	0.473	0.005	GFP susceptible increase
RF00005;tRNA;AAHY01139491.1/10543-10615	65.712	0.576	0.010	GFP susceptible increase
RF00005;tRNA;AC107738.16/7082-7148	12.596	0.672	0.011	GFP susceptible increase
RF00005;tRNA;AC124439.4/92685-92757	14.378	0.609	0.017	GFP susceptible increase
RF00068;SNORD21;AEKQ01160438.1/254-161	2237.296	0.419	0.017	GFP susceptible increase
RF00271;SNORD60;AAHY01131649.1/16031-16108	132.094	0.379	0.018	GFP susceptible increase
RF00005;tRNA;AC153815.7/206527-206456	74.282	0.394	0.024	GFP susceptible increase
RF00212;SNORD38;X94603.1/205-273	80.590	0.381	0.033	GFP susceptible increase
RF00181;SNORD113;CAAA01088149.1/55188-55114	3.157	0.732	0.039	GFP susceptible increase
RF00004;U2;AEKR01023484.1/5201-5301	0.175	0.381	0.041	GFP susceptible increase
RF00604;SNORD88;AAHY01061119.1/48695-48784	27.259	0.497	0.045	GFP susceptible increase
RF00045;SNORA73;AAHY01040498.1/1780-1984	3.795	0.666	0.049	GFP susceptible increase
RF00019;Y_RNA;AEKR01196082.1/4486-4611	179.197	-0.564	0.000	GFP susceptible decrease
RF00019;Y_RNA;CAAA01059689.1/54924-54815	6.563	-1.190	0.000	GFP susceptible decrease
RF00408;SNORA1;AC155259.1/219269-219137	26.635	-0.717	0.005	GFP susceptible decrease
RF00105;SNORD115;AC169674.5/113799-113877	4.855	-0.898	0.009	GFP susceptible decrease
RF00005;tRNA;AC125170.3/36648-36712	3.320	-0.917	0.013	GFP susceptible decrease
RF00005;tRNA;AAHY01207664.1/126-55	2.977	-0.904	0.013	GFP susceptible decrease
RF00072;SNORA75;AAHY01008130.1/18060-18192	2.449	-0.899	0.015	GFP susceptible decrease

RF00026;U6;AC237159.3/17187-17083	2.898	-0.888	0.016	GFP susceptible decrease
RF00005;tRNA;AC167669.1/101000-100929	1.154	-0.825	0.017	GFP susceptible decrease
RF00614;SNORA11;AAHY01122478.1/5461-5587	2.678	-0.881	0.017	GFP susceptible decrease
RF00412;SNORA21;AAHY01062763.1/181-45	12.387	-0.617	0.021	GFP susceptible decrease
RF00005;tRNA;AAHY01214783.1/1422-1494	5.158	-0.758	0.026	GFP susceptible decrease
RF00100;7SK;AEKQ01056522.1/18138-17824	1.728	-0.809	0.027	GFP susceptible decrease
RF00005;tRNA;AC093317.22/3280-3220	9.336	-0.640	0.035	GFP susceptible decrease
RF00100;7SK;AAHY01133011.1/18689-18366	7.134	-0.695	0.037	GFP susceptible decrease
RF00019;Y_RNA;AAHY01038354.1/15138-15025	13.953	-0.546	0.040	GFP susceptible decrease
RF00400;SNORA28;FM991909.1/4-78	1.231	-0.712	0.045	GFP susceptible decrease
RF00005;tRNA;AAHY01214783.1/1422-1494	4.634	0.765	0.003	CRE control increase
RF00019;Y_RNA;AEKQ01042019.1/1500-1391	13.136	0.635	0.009	CRE control increase
RF00019;Y_RNA;AAHY01038354.1/15138-15025	13.009	0.472	0.014	CRE control increase
RF00026;U6;AAHY01165013.1/650-756	20.942	0.470	0.027	CRE control increase
RF00005;tRNA;AL596129.27/193665-193736	3.296	0.593	0.030	CRE control increase
RF00005;tRNA;AC143330.4/113005-112924	1.141	0.633	0.031	CRE control increase
RF00005;tRNA;AL589879.21/48271-48189	16.438	0.379	0.049	CRE control increase
RF00005;tRNA;AC114621.8/82602-82530	11.561	-0.865	0.000	CRE control decrease
RF00396;SNORA13;AC132358.3/106983-106852	3.231	-1.008	0.000	CRE control decrease
RF00635;HAR1A;AAHY01013429.1/32-166	2.004	-0.935	0.002	CRE control decrease
RF00100;7SK;AC124727.4/37840-37508	1.790	-0.866	0.005	CRE control decrease
RF00005;tRNA;AL645470.20/98227-98296	1.072	-0.869	0.005	CRE control decrease
RF01960;SSU_rRNA_eukarya;AAHY01051041.1/23270-21615	646.382	-0.723	0.006	CRE control decrease
RF00017;Metazoa_SRP;AEKR01198626.1/4480-4835	1.569	-0.829	0.007	CRE control decrease
RF00302;SNORA65;AC156290.10/22658-22538	1.238	-0.814	0.009	CRE control decrease
RF00100;7SK;CAAA01027852.1/2046-1708	1.701	-0.788	0.011	CRE control decrease
RF00020;U5;CAAA01107742.1/2808-2923	0.319	-0.607	0.014	CRE control decrease
RF01296;snoU85;AEKQ01124495.1/10065-10389	15.145	-0.388	0.018	CRE control decrease
RF00100;7SK;AEKQ01097943.1/1159-1494	2.242	-0.663	0.026	CRE control decrease
RF00100;7SK;AAHY01679013.1/385-682	1.473	-0.694	0.026	CRE control decrease
RF00005;tRNA;AC158953.8/179545-179616	5.662	-0.608	0.026	CRE control decrease
RF00100;7SK;AAHY01133011.1/18689-18366	10.887	-0.550	0.033	CRE control decrease
RF00100;7SK;AAHY01107339.1/3413-3734	2.125	-0.655	0.033	CRE control decrease
RF00619;U6atac;AEKQ01196683.1/880-755	0.322	-0.546	0.036	CRE control decrease
RF00016;SNORD14;AC104918.13/108869-108955	0.515	-0.592	0.036	CRE control decrease
RF00005;tRNA;AC122236.5/130641-130711	0.232	-0.467	0.038	CRE control decrease
RF00002;5_8S_rRNA;AEKQ01051589.1/322-180	120.445	-0.433	0.039	CRE control decrease
RF00091;SNORA62;AEKQ01038831.1/8081-8217	2.044	-0.622	0.040	CRE control decrease
RF00016;SNORD14;AAHY01784809.1/8784-8697	21.888	-0.411	0.042	CRE control decrease
RF00100;7SK;AC160411.8/123410-123103	1.412	-0.613	0.049	CRE control decrease
RF00610;SNORD110;CAAA01172599.1/18161-18094	107.193	0.472	0.000	CRE susceptible increase
RF00093;SNORD18;AAHY01078834.1/8633-8566	52.275	0.501	0.000	CRE susceptible increase
RF00581;SNORD12;AEKR01288051.1/604-693	99.525	0.499	0.001	CRE susceptible increase
RF00019;Y_RNA;CAAA01059689.1/54924-54815	6.322	0.789	0.002	CRE susceptible increase
RF00581;SNORD12;CAAA01140939.1/1570-1658	26.683	0.521	0.002	CRE susceptible increase
RF00410;SNORA2;AAHY01095829.1/3779-3643	9.845	0.640	0.007	CRE susceptible increase
RF00570;SNORD64;AF357424.1/1-38	6.036	0.591	0.017	CRE susceptible increase
RF00005;tRNA;AAHY01104766.1/148152-148047	4.689	0.576	0.037	CRE susceptible increase
RF00019;Y_RNA;AAHY01038354.1/15138-15025	14.030	0.389	0.043	CRE susceptible increase
RF00005;tRNA;AC129186.3/73645-73718	2.694	0.580	0.048	CRE susceptible increase
RF00005;tRNA;AAHY01072647.1/30980-30911	0.397	0.440	0.048	CRE susceptible increase
RF00019;Y_RNA;AAHY01004943.1/242-131	2.495	0.584	0.049	CRE susceptible increase
RF00190;SNORA16;CAAA01052997.1/2788-2923	13.173	0.386	0.049	CRE susceptible increase
RF01960;SSU_rRNA_eukarya;AAHY01051041.1/23270-21615	980.190	-1.495	0.000	CRE susceptible decrease

RF01960;SSU_rRNA_eukarya;CT010467.6/67702-65856	11388.954	-0.791	0.000	CRE susceptible decrease
RF00002;5_8S_rRNA;AEKQ01042335.1/10197-10050	264.469	-1.048	0.000	CRE susceptible decrease
RF00002;5_8S_rRNA;AEKQ01051589.1/322-180	133.912	-0.787	0.000	CRE susceptible decrease
RF00100;7SK;AC124727.4/37840-37508	2.435	-1.294	0.000	CRE susceptible decrease
RF00181;SNORD113;CAAA01088149.1/3876-3802	38.597	-0.499	0.000	CRE susceptible decrease
RF01291;SNORD97;CAAA01084202.1/39331-39498	153.145	-0.448	0.005	CRE susceptible decrease
RF00100;7SK;AAHY01133011.1/18689-18366	11.359	-0.715	0.005	CRE susceptible decrease
RF00403;SNORA41;AAHY01006824.1/38495-38626	2893.652	-0.446	0.006	CRE susceptible decrease
RF00418;SNORA58;CAAA01007162.1/23611-23476	2.336	-0.799	0.007	CRE susceptible decrease
RF00017;Metazoa_SRP;AAHY01074224.1/12820-13064	51.391	-0.395	0.008	CRE susceptible decrease
RF00045;SNORA73;AAHY01040498.1/1780-1984	4.147	-0.657	0.015	CRE susceptible decrease
RF00005;tRNA;AL645470.20/98227-98296	0.930	-0.690	0.018	CRE susceptible decrease
RF00005;tRNA;AC124828.14/43577-43499	0.234	-0.466	0.021	CRE susceptible decrease
RF00005;tRNA;AL603664.16/44902-44970	2.496	-0.663	0.025	CRE susceptible decrease
RF00017;Metazoa_SRP;AEKR01198626.1/4480-4835	1.438	-0.664	0.026	CRE susceptible decrease
RF00005;tRNA;AC114621.8/82602-82530	9.430	-0.454	0.029	CRE susceptible decrease
RF00003;U1;AEKQ01148046.1/76773-76921	2.491	-0.623	0.031	CRE susceptible decrease
RF00005;tRNA;AAHY01015265.1/1103-1033	0.677	-0.585	0.034	CRE susceptible decrease
RF00155;SNORA66;AAHY01038705.1/1850-1722	0.694	-0.574	0.038	CRE susceptible decrease

Supplementary Table 9. Statistics of main figures

Figure panel	Statistics
Figure 1b	$F_{1,32}=4.12$, * $P<0.05$, two way ANOVA, effect of virus, n = 8-10
Figure 1c	$t_{11}=2.21$, * $P<0.05$, two-tailed t-test, n=6-7
Figure 1d	Closed arms: $t_{11}=3.266$, * $P<0.01$, Open arms: $t_{11}=3.143$, * $P<0.01$ two-tailed t-test, n=6-7
Figure 1e	D2 Cre- vs. Cre+: $t_{20}=2.367$, * $P<0.05$, two-tailed t-test, n = 8-13
Figure 1f	$F_{1,18}=9.08$, ** $P<0.01$, two way ANOVA, effect of virus only when target present, n=5,6
Figure 1g	$F_{1,7}=10.54$, * $P<0.05$, two way ANOVA, interaction effect, n=4-5
Figure 2a	Axin2: $t_{14}=3.959$, ** $P<0.01$; TCF3: $t_{14}=2.407$, * $P<0.05$; TCF4: $t_{14}=2.669$, * $P<0.05$, two-tailed t-test, n=6-10
Figure 2b	TCF3: $F_{2,34}=3.547$, * $P<0.05$; TCF4: $F_{2,34}=4.818$, * $P<0.05$, n=9-16
Figure 2c	Axin2 D2(+): $F_{2,9}=9.86$, ** $p<0.01$, control vs. resilient $p<0.05$, susceptible vs. resilient, $p<0.01$, n=3-5; Axin2 D2(-): $F_{2,8}=1.64$, NS, $P>0.05$, n=3-5, one way ANOVA
Figure 2d	$t_4=4.683$, ** $P<0.01$, two-tailed t-test, n=3/group
Figure 2f	Axin2: $t_9=2.37$, * $P<0.05$, n=5-6; TCF3: $t_8=3.782$, ** $P<0.01$, n=4-6; TCF4: $t_8=3.549$, ** $P<0.01$, n=4-6, two-tailed t-test
Figure 3a	$F_{2,9}=7.808$, * $P<0.05$, 1-way ANOVA, post-hoc test control vs. resilient and susceptible vs. resilient at LEFF TFBS, * $P<0.05$, n=4/group
Figure 3f	Gadd45a: $F_{2,8}=11.14$, * $P<0.05$, 1 way ANOVA; Dicer1: $F_{2,8}=6.702$, * $P<0.05$, 1 way ANOVA, n=3-4
Figure 3g	Dicer1: $F_{2,28}=6.046$, * $P<0.01$, 1-way ANOVA, n=7-13
Figure 4b	$F_{1,26}=8.535$, ** $P<0.01$, effect of virus, n=7-8, two-way ANOVA
Figure 4c	$F_{1,12}=4.913$, * $P<0.05$, interaction effect, matching two-way ANOVA, n=7/group

Supplementary Notes: Some detailed statistic analysis results from main text.

- 1. FST results after β -catenin S33Y mutant overexpression in mouse NAc:**
time immobile in seconds: HSV-GFP 211 ± 6 , HSV-S33Y 175 ± 11 , $P < 0.05$,
two-tailed t-test, $n = 9$ /group.
- 2. ASD social interaction results after β -catenin S33Y mutant overexpression in mouse NAc:** SI time with target present in seconds: HSV-GFP 10.3 ± 3.6 , HSV-S33Y 39.6 ± 8.7 , $P < 0.05$, two-tailed t-test, $n = 7-8$ /group.
- 3. Elevated levels of Axin2 in resilient mice 10 day post CSDS:** resilient: $131\% \pm 5.3\%$ of control, $P < 0.05$; susceptible: $116\% \pm 7.5\%$ of control, $p > 0.05$, 1 way ANOVA, $n = 6-8$ /group.