Modulation of miRNA expression in aged rat hippocampus by buttermilk and krill oil

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Supporting Information

Additional supporting information may be found in the online version of this article.

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Table S8. Sequence of genes primers selected for validation.

Table S1. miRNA sequencing results

	miRNA	logFC	PValue	FDR
BMFC vs Control	**miR-146a-3p**	-3.674	0.000	0.013
	miR-3552	-3.389	0.000	0.013
	miR-181a-5p	-2.760	0.001	0.039
	miR-17-1-3p	-2.168	0.001	0.032
	miR-483-3p	-2.083	0.001	0.032
	miR-17-5p	-1.756	0.001	0.033
	miR-20a-5p	-1.575	0.000	0.013
	miR-339-5p	-1.569	0.000	0.013
	miR-99a-3p	-1.501	0.001	0.032
	miR-3102	-1.397	0.000	0.008
	miR-31a-5p	-1.394	0.001	0.033
	miR-582-5p	-1.376	0.001	0.032
	miR-3065-3p	-1.261	0.001	0.035
	miR-369-3p	-1.255	0.002	0.044
	miR-872-3p	-1.238	0.001	0.039
	miR-219a-5p	-1.147	0.001	0.032
	miR-674-5p	-1.004	0.002	0.041
	miR-450a-5p	-0.970	0.001	0.032
	miR-15b-5p	-0.956	0.002	0.044
	miR-181b-5p	-0.932	0.001	0.040
	let-7f-5p	0.822	0.002	0.045
	miR-148a-5p	0.918	0.002	0.047
	miR-195-3p	1.023	0.002	0.042

	miRNA	logFC	PValue	FDR
	miR-17-5p	-2.747	0.001	0.008
	miR-3583-3p	-2.575	0.011	0.045
	miR-362-3p	-2.464	0.002	0.013
	miR-17-1-3p	-2.377	0.007	0.031
	miR-20a-5p	-2.305	0.000	0.000
	miR-449a-5p	-2.287	0.002	0.014
	miR-369-3p	-2.254	0.000	0.006
	miR-362-5p	-2.242	0.001	0.009
	let-7f-2-3p	-2.192	0.002	0.015
	miR-339-5p	-2.154	0.000	0.004
	miR-764-3p	-2.115	0.011	0.043
	miR-107-3p	-2.102	0.000	0.002
	miR-194-5p	-1.922	0.000	0.002
	miR-770-5p	-1.899	0.001	0.009
	miR-144-5p	-1.896	0.006	0.028
	miR-93-3p	-1.876	0.003	0.018
	miR-374-5p	-1.849	0.000	0.001
	miR-582-5p	-1.824	0.000	0.003
	miR-3065-3p	-1.797	0.000	0.002
	miR-137-3p	-1.771	0.000	0.002
	miR-99a-3p	-1.699	0.001	0.008
	miR-106b-5p	-1.696	0.000	0.001
	miR-324-3p	-1.689	0.000	0.005
	miR-539-3p	-1.671	0.000	0.006
	miR-143-5p	-1.592	0.001	0.008
	miR-34c-3p	-1.585	0.003	0.017
	miR-30c-5p	-1.546	0.001	0.007
	miR-494-3p	-1.543	0.000	0.006
	miR-872-3p	-1.522	0.001	0.009

BMFC+KOC vs Control	**miR-98-3p**	-1.465	0.009	0.038
	miR-31a-5p	-1.457	0.000	0.004
	miR-16-5p	-1.453	0.000	0.002
	miR-126a-5p	-1.408	0.001	0.008
	miR-708-5p	-1.396	0.000	0.005
	miR-410-3p	-1.391	0.000	0.006
	miR-1193-3p	-1.344	0.008	0.033
	miR-425-3p	-1.326	0.002	0.015
	miR-93-5p	-1.272	0.000	0.004
	miR-674-5p	-1.266	0.001	0.008
	miR-376b-3p	-1.238	0.004	0.022
	miR-361-5p	-1.225	0.001	0.009
	miR-181b-5p	-1.222	0.001	0.009
	miR-221-3p	-1.216	0.001	0.008
	miR-219a-5p	-1.200	0.007	0.033
	miR-450a-5p	-1.181	0.001	0.008
	miR-186-5p	-1.177	0.000	0.006
	miR-138-5p	-1.166	0.001	0.009
	miR-497-5p	-1.146	0.007	0.029
	miR-3589	-1.126	0.003	0.019
	let-7e-3p	-1.079	0.001	0.009
	miR-384-5p	-1.073	0.004	0.022
	miR-98-5p	-1.071	0.001	0.009
	miR-15b-5p	-1.048	0.006	0.027
	miR-384-3p	-0.997	0.006	0.028
	miR-874-3p	-0.986	0.004	0.023
	miR-379-3p	-0.970	0.002	0.015
	miR-23a-3p	-0.892	0.006	0.028
	miR-195-5p	-0.891	0.006	0.028
	miR-191a-5p	-0.874	0.003	0.016
	miR-140-5p	-0.863	0.003	0.019
	miR-421-3p	-0.863	0.009	0.038
	miR-26b-5p	-0.848	0.004	0.022
	miR-146a-5p	-0.844	0.004	0.021
	miR-29a-3p	-0.835	0.007	0.033
	miR-543-3p	0.690	0.012	0.047
	miR-455-5p	0.763	0.012	0.047
	miR-495	0.810	0.006	0.028
	let-7i-5p	0.811	0.007	0.030
	miR-541-5p	0.822	0.009	0.038
	miR-134-5p	0.840	0.010	0.041
	miR-143-3p	0.884	0.005	0.024
	miR-135a-3p	0.899	0.008	0.033
	miR-125-1-3p	0.899	0.009	0.038
	let-7f-5p	0.905	0.005	0.027
	miR-139-5p	0.923	0.001	0.009
	miR-99a-5p	0.940	0.004	0.021
	miR-361-3p	0.965	0.006	0.028
	miR-185-3p	0.969	0.009	0.038
	miR-99b-5p	0.973	0.010	0.038
	miR-380-5p	0.975	0.005	0.023
	miR-6331	0.976	0.004	0.021
	miR-128-3p	0.981	0.003	0.018
	miR-30c-2-3p	0.995	0.001	0.010
	miR-1843-5p	1.008	0.005	0.023
	miR-106b-3p	1.015	0.003	0.018
	miR-192-5p	1.042	0.001	0.010
	miR-3559-3p	1.060	0.009	0.038

miR-1843-5p	1.092	0.004	0.022
miR-99b-3p	1.156	0.001	0.008
miR-184	1.180	0.003	0.019
miR-30e-3p	1.208	0.002	0.013
miR-676	1.227	0.000	0.003
miR-344-1-3p	1.236	0.000	0.001
miR-673-3p	1.264	0.000	0.004
miR-770-3p	1.302	0.000	0.005
miR-493-3p	1.320	0.002	0.015
miR-370-3p	1.367	0.001	0.009
miR-485-5p	1.383	0.001	0.010
miR-379-5p	1.393	0.000	0.002
miR-3557-5p	1.422	0.000	0.003
miR-127-3p	1.423	0.000	0.001
miR-129-5p	1.460	0.002	0.015
miR-219-1-3p	1.464	0.002	0.012
miR-150-3p	1.605	0.001	0.007
miR-671	1.615	0.000	0.004
miR-381-3p	1.639	0.000	0.002
miR-674-3p	1.665	0.000	0.001
miR-148a-5p	1.682	0.000	0.001
miR-6329	1.690	0.000	0.001
miR-10a-5p	1.697	0.002	0.012
miR-27a-5p	1.725	0.000	0.002
miR-409b	1.728	0.000	0.001
miR-10b-5p	1.748	0.002	0.012
miR-195-3p	1.829	0.000	0.001
miR-708-3p	1.935	0.000	0.000
miR-6315	1.984	0.000	0.003
miR-151-3p	2.087	0.000	0.004
miR-148a-3p	2.288	0.000	0.000
miR-124-5p	3.505	0.002	0.013

BMFC: buttermilk fat concentrate rich in phospho- and sphingolipids; KOC: krill oil concentrate rich in omega-3 fatty acids (eicosapentaenoic acid and docosahexaenoic acid) and phospholipids; BMFC+KOC: combination of BMFC and KOC.

Table S2. Selected miRNAs for validation by RT-qPCR.

	miRNA	logFC	PValue	FDR	Function
BMFC	**let-7f-5p**	0.822	0.002	0.045	Down-regulation in AD
	miR-195-3p	1.023	0.002	0.042	Role in determining dementia susceptibility
	miR-148a-5p	0.918	0.002	0.047	Inhibition induces hepatocellular tumorigenesis
BMFC+KOC	**miR-99a-5p**	0.940	0.004	0.021	Neuroprotective effect
	miR-128-3p	0.981	0.003	0.018	Critical for hippocampus-related contextual learning
	miR-148a-3p	2.288	0.000	0.000	Downregulation in AD
	miR-29a-3p	-0.835	0.007	0.033	Neuronal synapse formation and plasticity
	miR-191a-5p	-0.874	0.003	0.016	Target genes to apoptosis and cell death pathways
	miR-381-3p	1.639	0.000	0.002	Linked to insulin resistance or T2D
	miR-379-5p	1.393	0.000	0.002	Predispose to neuropathic pain identified
	miR-30e-3p	1.208	0.002	0.013	Linked to insulin resistance
	miR-146a-5p	-0.844	0.004	0.021	Associated with AD.
	miR-370-3p	1.367	0.001	0.009	Downregulated by Mild Stress in Rat Hippocampal Tissues
	let-7f-5p	0.905	0.005	0.027	Downregulation in AD
	miR-770-3p	1.302	0.000	0.005	Down-regulated in the hippocampus of Sprague-Dawley rats with temporal lobe epilepsy
	miR-106b-3p	1.015	0.003	0.018	Protect mitochondrial functions
	miR-195-3p	1.829	0.000	0.001	Downregulation in AD
	miR-148a-5p	1.682	0.000	0.001	Cancer

BMFC: buttermilk fat concentrate rich in phospho- and sphingolipids; KOC: krill oil concentrate rich in omega-3 fatty acids (eicosapentaenoic acid and docosahexaenoic acid) and phospholipids; BMFC+KOC: combination of BMFC and KOC.

Table S3 (see Excel file attached to this manuscript supporting information)

Table S4. Gene expression microarray results.

	Gene	logFC	P.Value	Adj.P.Val
KOC	**Kcnj13**	-3	0.0000	0.0315
	Dpt	-2.4	0.0000	0.0275
	Tph1	-2.1	0.0000	0.0000
	Slc35f4	-2	0.0001	0.0452
	Exoc5	-1.8	0.0000	0.0315
	Barx1	-1.7	0.0000	0.0005
	Ippk	-1.5	0.0000	0.0013
	Lilrb3l	-1.4	0.0000	0.0013
	P4hb	-1.3	0.0000	0.0008
	Cenpn	-1.3	0.0001	0.0438
	---	-1.2	0.0000	0.0049
	Enpp2	-1.2	0.0001	0.0380
	Osr1	-1.1	0.0000	0.0275
	Ptgds	-1.1	0.0000	0.0315
	LOC654482	-1.1	0.0001	0.0341
	Slc6a20	-1.1	0.0001	0.0380
	Bicd2	-1	0.0000	0.0226
	Ch25h	-1	0.0000	0.0293
	Arhgef15	-1	0.0001	0.0371
	Sox21	-1	0.0001	0.0452
	Nutm2f	-1	0.0001	0.0452
	Rarres1	-0.9	0.0000	0.0315
	Car13	-0.9	0.0001	0.0332
	Id4	-0.9	0.0001	0.0438
	Efhc1	-0.9	0.0002	0.0490
	Ctsc	-0.8	0.0001	0.0452
	Aox4	-0.8	0.0001	0.0452
	Gpr135	0.8	0.0001	0.0426
	Pygo2	0.8	0.0001	0.0452
	Fam163b	0.8	0.0001	0.0452
	Ptpn4	0.8	0.0001	0.0452
	St6gal2	0.8	0.0002	0.0495
	Pak6	0.9	0.0000	0.0315
	Arc	0.9	0.0000	0.0315
	Ramp3	0.9	0.0001	0.0341
	Cckbr	0.9	0.0001	0.0371
	N4bp2	1	0.0000	0.0266
	Yeats2	1	0.0001	0.0438
BMFC	**Kcnj13**	-2.8	2.53E-12	2.91E-08
	Dpt	-2.3	8.23E-11	4.74E-07
	Zfp358	-2.1	4.15E-09	6.81E-06
	Cbr3	-2	2.60E-09	4.99E-06

	Mfrp	-2	1.51E-08	2.17E-05
	Tmem72	-1.9	5.70E-08	7.29E-05
	Sostdc1	-1.8	4.66E-10	1.34E-06
	Barx1	-1.8	4.56E-10	1.34E-06
	Ippk	-1.6	2.29E-09	4.99E-06
	Slco1a5	-1.6	1.05E-07	0.00011518
	Tph1	-1.6	2.45E-06	0.0011723
	Ahsg	-1.5	3.48E-07	0.00026687
	Slc35f4	-1.4	1.10E-07	0.00011518
	Exoc5	-1.4	1.75E-07	0.00016792
	Slc4a5	-1.4	2.40E-07	0.00020184
	Slc13a4	-1.4	4.28E-07	0.00029527
	Prlr	-1.4	1.45E-05	0.00476127
	Ict1	-1.3	2.46E-07	0.00020184
	C7	-1.3	4.88E-07	0.00029527
	Prr32	-1.3	6.79E-07	0.00039051
	Zfp24	-1.3	6.74E-06	0.0025839
	Ptgds	-1.2	4.47E-07	0.00029527
	---	-1.2	4.70E-07	0.00029527
	Slc6a20	-1.2	7.25E-07	0.00039735
	Aqp1	-1.2	7.68E-06	0.00276169
	Cldn2	-1.2	5.98E-05	0.01465844
	Myog	-1.1	1.60E-06	0.00079918
	Ctsc	-1.1	3.03E-06	0.00134359
	Enpp2	-1.1	3.04E-06	0.00134359
	Ch25h	-1.1	3.43E-06	0.00146244
	Abca4	-1.1	4.89E-06	0.00200889
	Folr1	-1.1	2.45E-05	0.00721838
	Cbr1	-1.1	5.20E-05	0.01329863
	Emp3	-1	6.23E-06	0.00247225
	Bicd2	-1	1.24E-05	0.00430572
	LOC654482	-1	1.31E-05	0.0044311
	Mospd1	-1	1.67E-05	0.00533843
	Lepr	-1	1.77E-05	0.00551727
	P4hb	-1	2.09E-05	0.00632722
	Atp11c	-1	3.81E-05	0.01086025
	Cenpn	-1	4.38E-05	0.01184456
	Igf2	-1	6.44E-05	0.01544012
	Rpl9	-1	8.19E-05	0.01884002
	Sst	-1	8.66E-05	0.01952348
	Tmem27	-1	0.000134	0.02854155
	Elovl7	-0.9	3.87E-05	0.01086025
	Pla2g5	-0.9	4.43E-05	0.01184456
	Ranbp3l	-0.9	4.77E-05	0.01247554
	Hmgb2l1	-0.9	5.99E-05	0.01465844

	Trim34	-0.9	6.94E-05	0.01628543
	Capn7	-0.9	0.00011415	0.02525007
	Slc2a12	-0.9	0.00013173	0.02854155
	C1qtnf3	-0.9	0.00014208	0.02971226
	Mdk	-0.9	0.00014941	0.03068729
	Slc22a8	-0.8	0.00021362	0.04310616
	Spata20	-0.8	0.00022686	0.04498921
	Arc	1	7.18E-06	0.00266579
	Adss	1.3	1.03E-06	0.00053942
BMFC+KOC	**Zfp358**	-3.6	0.0000	0.0000
	Kcnj13	-3.9	0.0000	0.0000
	Dpt	-3.7	0.0000	0.0000
	Zfp24	-3.5	0.0000	0.0000
	Cbr3	-3.4	0.0000	0.0000
	Mfrp	-3.2	0.0000	0.0000
	Sostdc1	-2.9	0.0000	0.0000
	Tmem72	-2.9	0.0000	0.0000
	Prlr	-2.6	0.0000	0.0000
	Ahsg	-2.4	0.0000	0.0000
	Exoc5	-2.4	0.0000	0.0000
	Cldn2	-2.4	0.0000	0.0001
	Slc35f4	-2.2	0.0000	0.0000
	Slc4a5	-2.1	0.0000	0.0000
	Folr1	-2	0.0000	0.0000
	Prr32	-2	0.0000	0.0000
	Slco1a5	-2	0.0000	0.0000
	Ict1	-1.9	0.0000	0.0000
	Tmem27	-1.8	0.0000	0.0010
	Sst	-1.6	0.0000	0.0011
	Cenpn	-1.5	0.0000	0.0002
	Aqp1	-1.5	0.0000	0.0007
	Abca4	-1.5	0.0000	0.0007
	Cbr1	-1.5	0.0000	0.0022
	Slc13a4	-1.5	0.0000	0.0117
	Htr2c	-1.4	0.0000	0.0008
	Capn7	-1.3	0.0000	0.0014
	Itpripl1	-1.2	0.0000	0.0015
	Glycam1	-1.2	0.0000	0.0015
	Pla2g5	-1.2	0.0000	0.0017
	LOC654482	-1.2	0.0000	0.0022
	Rpl9	-1.2	0.0000	0.0063
	Enpp2	-1.1	0.0000	0.0021
	Spata20	-1.1	0.0000	0.0044
	Itgb6	-1.1	0.0000	0.0057
	Atp11c	-1.1	0.0000	0.0070

	Scgb1c1	-1.1	0.0000	0.0077
	Aimp2	-1.1	0.0000	0.0098
	Mdk	-1.1	0.0001	0.0231
	Slc2a12	-1.1	0.0003	0.0475
	Efhc1	-1	0.0000	0.0075
	Tbc1d10a	-1	0.0000	0.0088
	Creg1	-1	0.0001	0.0177
	Diaph3	-1	0.0001	0.0239
	Narfl	-0.9	0.0000	0.0082
	Wdr63	-0.9	0.0000	0.0100
	RGD1564074	-0.9	0.0000	0.0111
	Glipr2	-0.9	0.0000	0.0117
	Fbxo45	-0.9	0.0000	0.0119
	LOC100909960	-0.9	0.0001	0.0134
	Lama2	-0.9	0.0001	0.0163
	Cars2	-0.9	0.0001	0.0264
	Olr109	-0.9	0.0001	0.0289
	Slc4a2	-0.9	0.0002	0.0316
	Wfs1	-0.9	0.0002	0.0365
	Muc19l1	-0.8	0.0001	0.0239
	Igfbpl1	-0.8	0.0002	0.0383
	Mast3	-0.8	0.0002	0.0384
	---	-0.8	0.0002	0.0415
	Fam92b	-0.8	0.0003	0.0473
	Six3	-0.8	0.0003	0.0486
	LOC100911887	0.8	0.0001	0.0276
	Samd15	0.8	0.0002	0.0365
	Tnks	0.8	0.0003	0.0465
	Sptssb	0.8	0.0003	0.0469
	Satb2	0.8	0.0003	0.0489
	ATP6	0.8	0.0003	0.0489
	MGC116197	0.9	0.0002	0.0342
	LOC102550585	1	0.0000	0.0068
	Cckbr	1	0.0000	0.0070
	LOC102555217	1	0.0000	0.0082
	Npas4	1	0.0002	0.0351

BMFC: buttermilk fat concentrate rich in phospho- and sphingolipids; KOC: krill oil concentrate rich in omega-3 fatty acids (eicosapentaenoic acid and docosahexaenoic acid) and phospholipids; BMFC+KOC: combination of BMFC and KOC.

Table S5 (see Excel file attached to this manuscript supporting information)

Table S6. Differently expressed genes from microarray results selected for validation by RT-qPCR.

Gene	miR Interaction	Study group	Gene Function	miRNA Function
Arc	7f-5p	KOC	Neuronal plasticity and memory	Downregulation in AD
Cbr3	191a-5p	BMFC	Parkinson's disease	Target genes to apoptosis and cell death pathways
	106b	BMFC+KOC	Parkinson's disease.	Protect mitochondrial functions
tshz3	148a-5p	BMFC+KOC	Reduced expression of this gene and consequent caspase upregulation may be correlated with progression of Alzheimer's disease	Inhibition induces hepatocellular tumorigenesis
	195-3p			Downregulation in AD
	30e-3p			Linked to insulin resistance
	381-3p			
pla2g5	106b	BMFC+KOC	Increased in several neurological and neurodegenerative disorders	Protect mitochondrial functions
	148a-3p			Downregulation in AD
	195-3p			Downregulation in AD
htr2c	195-3p	BMFC+KOC	Signaling of neurotransmitters	Downregulation in AD
	379-5p			Predispose to neuropathic pain identified
Mrps23	379-5p	KOC	Mitochondrial ribosomal proteins	Predispose to neuropathic pain identified
Capn7	128-3p	BMFC	Calpains are ubiquitous, have been implicated in neurodegenerative processes,	Critical for hippocampus-related contextual learning
	370-3p	KOC		Downregulated by Mild Stress in Rat Hippocampal Tissues
	128-3p	BMFC+KOC		Critical for hippocampus-related contextual learning
	370-3p			Downregulated by Mild Stress in Rat Hippocampal Tissues

	381-3p			Linked to insulin resistance or T2D
Sst	106b	BMFC+KOC	Neurotransmission	Protect mitochondrial functions
Satb2	128-3p	BMFC+KOC	Memory	Critical for hippocampus-related contextual learning
	148a-5p			Inhibition induces hepatocellular tumorigenesis
	381-3p			Linked to insulin resistance or T2D
Ip6k1	148a-5p	BMFC+KOC	Neurotransmission	Inhibition induces hepatocellular tumorigenesis
	770-3p			Down-regulated in the hippocampus of Sprague-Dawley rats with temporal lobe epilepsy
Tph1	379-5p	BMFC & KOC	biosynthesis of serotonin	Identified in primary sensory neurons that are associated with neuropathic pain

Arc: activity-regulated cytoskeleton-associated protein; Cbr3: carbonyl reductase 3; Tshz3: teashirt zinc finger homeobox 3; Pla2g5: phospholipase A2, group V; Htr2c: 5-hydroxytryptamine receptor 2C; Mrps23: mitochondrial ribosomal protein S23; Capn7: calpain 7; Sst: somatostatin; Satb2: SATB homeobox 2; Ip6k1: inositol hexakisphosphate kinase 1; Tph1: tryptophan hydroxylase 1; BMFC: buttermilk fat concentrate rich in phospho- and sphingolipids; KOC: krill oil concentrate rich in omega-3 fatty acids (eicosapentaenoic acid and docosahexaenoic acid) and phospholipids; BMFC+KOC: combination of BMFC and KOC.

Table S7. Sequence of miRNAs primers selected for validation.

miRNA	**sequence**
rno-let-7f-5p	TGAGGTAGTAGATTGTATAGTT
rno-miR-106b-3p	CCGCACTGTGGGTACTTGCTGC
rno-miR-128-3p	TCACAGTGAACCGGTCTCTTT
rno-miR-146a-5p	TGAGAACTGAATTCCATGGGTT
rno-miR-148a-3p	TCAGTGCACTACAGAACTTTG
rno-miR-148a-5p	AAAGTTCTGAGACACTCTGACTC
rno-miR-191a-5p	CAACGGAATCCCAAAAGCAGCTG
rno-miR-195-3p	CCAATATTGGCTGTGCTGCTCCA
rno-miR-29a-3p	TAGCACCATCTGAAATCGGTTA
rno-miR-30e-3p	CTTTCAGTCGGATGTTTACAGC
rno-miR-370-3p	GCCTGCTGGGGTGGAACCTGGT
rno-miR-381-3p	TATACAAGGGCAAGCTCT
rno-miR-770-3p	GTGGGCCTGACGTGGAG
rno-miR-99a-5p	AACCCGTAGATCCGATCTTGTG
rno-miR-379-5p	TGGTAGACTATGGAACGTAGG

Table S8. Sequence of genes primers selected for validation.

Gene	Name	Sequence
Arc	rno-Arc-FW	AAAGCAGCAGCAAGATGGTT
	rno-Arc-REV	GAGTCTTGCCTCCTGTCCTG
Cbr3	rno-Cbr3-FW	GCTGCCCATAATGAAACCACA
	rno-Cbr3-REV	GTCTGGCCAACCTTCTCTCT
Tshz3	rno-Tshz3-FW	GCAGCACAGCCATTATCACG
	rno-Tshz3-REV	GGCCAGACTGTTGCTCATCT
Pla2g5	rno-Pla2g5-FW	CTTGGGCTGCCAGCATAAAC
	rno-Pla2g5-REV	GCAGCCGTAGAAGCCATAGT
Htr2c	rno-Htr2c-FW	CGGACGGGGTACAAAACTGG
	rno-Htr2c-REV	AATCCAGACGGGGCACAAAT
Mrps23	rno-Mrps23-FW	CACATGGTGTGGTTCCTCGG
	rno-Mrps23-REV	CTTAGCCCAACCCGTGACAT
Capn7	rno-Capn7-FW	AGTTCTCCTCGCAGTGCCTC
	rno-Capn7-REV	TTGGGCAGCTTCCTTGTAGTA
Sst	rno-Sst-FW	ACCCCAGACTCCGTCAGTTT
	rno-Sst -REV	CCAGGGCATCGTTCTCTGTC
Satb2	rno-Satb2-FW	AAAACCTCGACACCGACAAC
	rno-Satb2-REV	CCAACGAAGCAGTTCACAGA
Ip6k1	rno-Ip6k1-FW	ACCAAGGCTGCATCATTTTGAC
	rno-Ip6k1-REV	AAACACACATTGCGTTGGGG

Arc: activity-regulated cytoskeleton-associated protein; Cbr3: carbonyl reductase 3; Tshz3: teashirt zinc finger homeobox 3; Pla2g5: phospholipase A2, group V; Htr2c: 5-hydroxytryptamine receptor 2C; Mrps23: mitochondrial ribosomal protein S23; Capn7: calpain 7; Sst: somatostatin; Satb2: SATB homeobox 2; Ip6k1: inositol hexakisphosphate kinase 1; Tph1: tryptophan hydroxylase 1; FW: Forward; REV: Reverse.