

Supplementary Table 1 primers used for RT-PCR

Name	Sequence	Type
<i>RT-Slc38a1-For</i>	GCCATCTTTGGGTA CTTGAC	cDNA
<i>RT-Slc38a1-Rev</i>	GTGCTCTGGTA CTTGTGA	cDNA
<i>RT-Nrep-For</i>	CTAAGGAAGTGAACCGAAAGAAG	cDNA
<i>RT-Nrep-Rev</i>	GGTAGCTGGAGAGGTGAAT	cDNA
<i>RT-Egr1-For</i>	TCACCTATACTGGCCGCTTC	cDNA
<i>RT-Egr1-Rev</i>	GGTTCAGGCCACAAAGTGTT	cDNA
<i>RT-Irx3-For</i>	TGGAACAGATCGCTGTAGTG	cDNA
<i>RT-Irx3-Rev</i>	TGGAAAGCTGTCTTGAGTAA	cDNA
<i>RT-Csrp1-For</i>	GCAACAGCTTCCATAAATCCT	cDNA
<i>RT-Csrp1-Rev</i>	CCATACTTCTTGCCGTAACAT	cDNA
<i>RT-Lnpep-For</i>	CTTGCTGGCTTGGGATTT	cDNA
<i>RT-Lnpep-Rev</i>	GGAGCCCAGATGGA ACTTAT	cDNA
<i>Apoc2-F</i>	TCAGCATGGATGAGAAAC	cDNA
<i>Apoc2-R</i>	CCCTCAGGAGAGTAAGGAG	cDNA
<i>Cdon-F</i>	GCCAACAGAGCACCATAC	cDNA
<i>Cdon-R</i>	CTCTACCATCTGCCATTA	cDNA
<i>Zmiz1-F</i>	CGCCATCAAGGTGTCTCT	cDNA
<i>Zmiz1-R</i>	CCTCGCTCACAATTCAGT	cDNA

Supplementary Table 2 RNA transcripts altered by loss of MeCP2 (P<0.0005)

Gene Symbol	Gene Title	Fold change(red- , black+)
<i>1200009O22Rik</i>	RIKEN cDNA 1200009O22 gene	1.3199861
<i>2010001J22Rik</i>	RIKEN cDNA 2010001J22 gene	1.6032917
<i>2410004P03Rik</i>	RIKEN cDNA 2410004P03 gene	1.3122652
<i>2610017I09Rik</i>	RIKEN cDNA 2610017I09 gene	1.2281135
<i>2610207I05Rik</i>	RIKEN cDNA 2610207I05 gene	1.2685544

<i>2810029C07Rik</i>	RIKEN cDNA 2810029C07 gene	1.3075414
<i>3100002J23Rik</i>	RIKEN cDNA 3100002J23 gene	2.5638082
<i>3110003A17Rik</i>	RIKEN cDNA 3110003A17 gene	1.2434744
<i>3110035E14Rik</i>	RIKEN cDNA 3110035E14 gene	1.8093741
<i>4930579J09Rik</i>	RIKEN cDNA 4930579J09 gene	2.1873207
<i>9230110C19Rik</i>	RIKEN cDNA 9230110C19 gene	1.4008421
<i>A830059I20Rik</i>	RIKEN cDNA A830059I20 gene	1.2406968
<i>Aard</i>	alanine and arginine rich domain containing protein	1.2112767
<i>AB124611</i>	cDNA sequence AB124611	1.448705
<i>AI504432</i>	expressed sequence AI504432	1.5371199
<i>AI662270</i>	expressed sequence AI662270	1.5409324
<i>AI987986</i>	expressed sequence AI987986	2.488317
<i>AK220484</i>	cDNA sequence AK220484	1.2608101
<i>Aldoc</i>	aldolase 3, C isoform	1.2304002
<i>Alox5ap</i>	arachidonate 5-lipoxygenase activating protein	1.2686576
<i>Anxa1</i>	annexin A1	1.3014349
<i>Anxa3</i>	annexin A3	1.2547553
<i>Apoc2</i>	apolipoprotein C-II	1.4037249
<i>Arhgdib</i>	Rho, GDP dissociation inhibitor (GDI) beta	1.2733324
<i>Armc3</i>	armadillo repeat containing 3	1.4237647
<i>BB146404</i>	expressed sequence BB146404	1.3245964
<i>Bbox1</i>	butyrobetaine (gamma), 2-oxoglutarate dioxygenase 1 (gamma-butyrobetaine hydroxylase)	2.3494308
<i>Brunol4</i>	bruno-like 4, RNA binding protein (Drosophila)	1.5389663
<i>Clr</i>	complement component 1, r subcomponent	1.34145
<i>C3</i>	complement component 3	1.788378
<i>C530044C16Rik</i>	RIKEN cDNA C530044C16 gene	1.4980309
<i>Ccdc114</i>	coiled-coil domain containing 114	1.48653
<i>Cd74</i>	CD74 antigen (invariant polypeptide of major histocompatibility complex, class II antigen-associated)	1.8498335
<i>Cdon</i>	cell adhesion molecule-related/down-regulated by oncogenes	1.287501
<i>Cep68</i>	centrosomal protein 68	1.2702885

<i>Cnot6l</i>	CCR4-NOT transcription complex, subunit 6-like	1.3137585
<i>Cntn1</i>	contactin 1	1.56654885
<i>Crh</i>	corticotropin releasing hormone	1.3553226
<i>Csrp1</i>	cysteine and glycine-rich protein 1	1.2579842
<i>D0H4S114</i>	DNA segment, human D4S114	1.3495843
<i>D2Bwg1423e</i>	DNA segment, Chr 2, Brigham & Women's Genetics 1423 expressed	1.2273129
<i>D730040F13Rik</i>	RIKEN cDNA D730040F13 gene	1.3859867
<i>Dkc1</i>	dyskeratosis congenita 1, dyskerin homolog (human)	1.2359445
<i>Dlc1</i>	deleted in liver cancer 1	1.2275105
<i>Dpyd</i>	dihydropyrimidine dehydrogenase	1.3387924
<i>Dpysl4</i>	dihydropyrimidinase-like 4	1.3475349
<i>Efcab1</i>	EF hand calcium binding domain 1	1.6479905
<i>EG232599</i>	predicted gene, EG232599	1.3447968
<i>EG633640</i>	predicted gene, EG633640	1.2745947
<i>Egr1</i>	early growth response 1	2.5555215
<i>ENSMUSG00000073624</i>	predicted gene, ENSMUSG00000073624	1.2233759
<i>Fbxo16</i>	F-box protein 16	1.2158778
<i>Fgf1</i>	fibroblast growth factor 1	1.4074056
<i>Fgfbp3</i>	fibroblast growth factor binding protein 3	1.5394058
<i>Folr1</i>	folate receptor 1 (adult)	1.2304002
<i>Fos</i>	FBJ osteosarcoma oncogene	2.5012958
<i>Fzd5</i>	frizzled homolog 5 (Drosophila)	1.2929868
<i>Gabrg1</i>	gamma-aminobutyric acid (GABA-A) receptor, subunit gamma 1	1.473107
<i>Gp1bb</i>	glycoprotein Ib, beta polypeptide	1.2529976
<i>Gria1</i>	glutamate receptor, ionotropic, AMPA1 (alpha 1)	1.6154985
<i>H3f3b</i>	H3 histone, family 3B	2.0970328
<i>Hist1h3f</i>	histone cluster 1, H3f	3.3159595
<i>Icam1</i>	intercellular adhesion molecule 1	1.2555484
<i>Ide</i>	insulin degrading enzyme	1.5247848
<i>Ier2</i>	immediate early response 2	1.703028
<i>Igfbp4</i>	insulin-like growth factor binding protein 4	1.2463028
<i>Il13ra1</i>	interleukin 13 receptor, alpha 1	1.345369
<i>Impact</i>	imprinted and ancient	1.3830662

<i>Irx3</i>	Iroquois related homeobox 3 (Drosophila)	2.0480883
<i>Itga1</i>	integrin alpha 1	1.2823926
<i>Josd3</i>	Josephin domain containing 3	1.2856086
<i>Jun</i>	Jun oncogene	1.2348865
<i>Lcn2</i>	lipocalin 2	3.0081117
<i>Limd2</i>	LIM domain containing 2	1.23241
<i>Lipa</i>	lysosomal acid lipase A	1.2705736
<i>Lnpep</i>	leucyl/cystinyl aminopeptidase	1.2049991
<i>Lrrfip1</i>	leucine rich repeat (in FLII) interacting protein 1	1.2164135
<i>Lyz2</i>	lysozyme 2	1.4264934
<i>Megf11</i>	multiple EGF-like-domains 11	1.824104
<i>Mpp7</i>	membrane protein, palmitoylated 7 (MAGUK p55 subfamily member 7)	1.4092764
<i>Ms4a6b</i>	membrane-spanning 4-domains, subfamily A, member 6B	1.2856375
<i>Ms4a6c</i>	membrane-spanning 4-domains, subfamily A, member 6C	1.2334442
<i>Msr1</i>	macrophage scavenger receptor 1	1.3455842
<i>Ncf2</i>	neutrophil cytosolic factor 2	1.2654923
<i>Ndn</i>	necdin	1.2235967
<i>Nkain4</i>	Na⁺/K⁺ transporting ATPase interacting 4	1.2680174
<i>Osmr</i>	oncostatin M receptor	1.3199704
<i>Pcdh17</i>	protocadherin 17	1.3092897
<i>Pcgf6</i>	polycomb group ring finger 6	1.2167385
<i>Pde1b</i>	phosphodiesterase 1B, Ca²⁺-calmodulin dependent	1.3068185
<i>Pdgfb</i>	platelet derived growth factor, B polypeptide	1.371351
<i>Phldb2</i>	pleckstrin homology-like domain, family B, member 2	1.2069079
<i>Pld4</i>	phospholipase D family, member 4	1.2251571
<i>Plekhm2</i>	pleckstrin homology domain containing, family M (with RUN domain) member 2	1.2004919
<i>Podxl</i>	podocalyxin-like	1.2564828
<i>Ppp2r2b</i>	protein phosphatase 2 (formerly 2A), regulatory subunit B (PR 52), beta isoform	1.2065306

<i>Psat1</i>	phosphoserine aminotransferase 1	1.2030232
<i>Ptpn18</i>	protein tyrosine phosphatase, non-receptor type 18	1.2513112
<i>Rab39b</i>	RAB39B, member RAS oncogene family	6.9517465
<i>Ror1</i>	receptor tyrosine kinase-like orphan receptor 1	1.2083408
<i>Rshl3</i>	radial spokehead-like 3	1.3681484
<i>Sec61a2</i>	Sec61, alpha subunit 2 (S. cerevisiae)	1.2063156
<i>SEPT3</i>	septin 3	1.2298033
<i>Slc10a3</i>	solute carrier family 10 (sodium/bile acid cotransporter family), member 3	1.4384748
<i>Slc11a1</i>	solute carrier family 11 (proton-coupled divalent metal ion transporters), member 1	1.2547054
<i>Slc16a13</i>	solute carrier family 16 (monocarboxylic acid transporters), member 13	1.2162495
<i>Slc38a1</i>	solute carrier family 38, member 1	1.2346531
<i>Stard5</i>	StAR-related lipid transfer (START) domain containing 5	1.2607622
<i>Stk10</i>	serine/threonine kinase 10	1.2168632
<i>Syn2</i>	synapsin II	1.77414
<i>Tm4sf1</i>	transmembrane 4 superfamily member 1	1.234867
<i>Tns1</i>	tensin 1	1.2124377
<i>Tspan13</i>	tetraspanin 13	1.3430191
<i>Zcche3</i>	zinc finger, CCHC domain containing 3	1.2078353
<i>Zfhx3</i>	zinc finger homeobox 3	1.4186854
<i>Zfp36</i>	zinc finger protein 36	1.4568895
<i>Zfp592</i>	zinc finger protein 592	1.2114612
<i>Zmiz1</i>	zinc finger, MIZ-type containing 1	1.3575476
<i>Mecp2</i>	methyl CpG binding protein 2	34.74993

Supplementary Table 3 primers used for ChIP-seq validation

<i>Name</i>	Sequence	Type
<i>Aard-For</i>	AAAACAACCCAGACGGACAG	ChIP-PCR
<i>Aard-Rev</i>	TACACACCCAGAAGCACGAG	ChIP-PCR
<i>Slc38a1-For</i>	CCACACTTCGACATCACCAG	ChIP-PCR
<i>Slc38a1-Rev</i>	GTGCAGATTGCAGAGCTGAG	ChIP-PCR
<i>Armc3-For</i>	AACACGAGGCATTCTCCAAC	ChIP-PCR
<i>Armc3-Rev</i>	TCAACGATCTCATCCAGGTG	ChIP-PCR