

**Table S2. Comparison of expression profiles for homozygous null and conditional  $\beta$ -catenin mutants**

AffymetrixID	Symbol	$\beta$ -cat 6.0	$\beta$ -cat 6.5	CKO-wt	CKO-het
94200_at	Gbx2	1	0	-5.4	-4.4
94200_at	Gbx2	-1.6	-2	-5.4	-4.4
95297_at	Hoxa1	-1.2	1.3	-5.1	-4.5
114959_at	C030045D06Rik			-5	-4.8
103477_at	Cdx1	1.3	-1	-4.2	-4.9
103477_at	Cdx1	1.2	1	-4.2	-4.9
135746_at	---			-3.8	-0.9
109748_at	5430401D19Rik			-3.7	-1.8
131812_at	Atp8a2			-3.4	-2.9
98028_at	Twist1	-1.2	1.8	-3.2	-3.6
130826_at	---			-3	-4.1
102667_at	Wnt3a	1.1	-1.2	-2.9	-3.2
102755_at	Itln			-2.8	-2.8
163495_at	Skp2			-2.7	-3.3
99361_at	Wnt8a	1	-1	-2.4	-3
116273_at	---			-2.1	-1.7
106125_at	2610024A01Rik			-2.1	-0.7
141010_at	Nkx1-2			-2.1	-2
92931_at	Dll1	1.4	-3	-2	-1.5
110311_at	Nkd1			-2	-1.3
103460_at	5830413E08Rik	-1.1	1.1	-1.9	-1.5
164204_at	A1427833			-1.7	-1.2
93888_at	Hoxb1	2.1	1.2	-1.7	-1.8
93888_at	Hoxb1	2.3	-1.8	-1.7	-1.8
165336_f_at	---			-1.6	-2.6
163901_at	6030401B09Rik			-1.6	-1.5
160254_at	Mil2-pending			-1.6	-1.7
93611_at	Tbx6	1.2	1.1	-1.6	-1.8
99390_at	Wnt5a	1	-1.2	-1.6	-1.8
97386_at	1110032O19Rik	-1.4	-1.6	-1.5	-1.6
110859_at	1300010M03Rik			-1.5	-0.7
98108_at	Crabp1	-1.5	-2.6	-1.5	-1.3
98108_at	Crabp1	1.6	1	-1.5	-1.3
98108_at	Crabp1	1.2	1.8	-1.5	-1.3
106927_at	Hoxb2			-1.5	-1.4
163658_at	6430704M03Rik			-1.4	-0.6
116917_at	LOC279653			-1.4	-0.7
108488_at	Smardc3			-1.4	-1.5
93941_at	T	-2.5	-4.6	-1.4	-1.4
98427_s_at	Nfkb1	1.1	0	-1.3	-1.1
97497_at	Notch1	-1.9	1.4	-1.3	-0.8
97497_at	Notch1	1	-1.1	-1.3	-0.8
97497_at	Notch1	1.4	-1.4	-1.3	-0.8
97497_at	Notch1	-1.1	1.3	-1.3	-0.8
97497_at	Notch1	-1.5	1.1	-1.3	-0.8
99086_g_at	Usp3			-1.3	-0.9
98831_at	Foxj1	1.2	-1.2	-1.2	-1
94117_f_at	Punc			-1.2	-1.2
108614_f_at	1110012O05Rik			-1.1	-1

104672_at	Frzb	1.7	-4.3	-1.1	-1
163539_at	---			-1	-1.3
94813_at	Gas1	1.3	-1.2	-1	-1.4
99034_at	Irx3			-1	-0.9
98419_at	Meox1	1.1	1.3	-1	-0.7
104716_at	Rbp1	1.3	1.2	-1	-1
97977_at	BC019633	-1.1	-1.9	-0.9	-0.9
104548_at	Phlda2	-2.1	-1.4	-0.9	-0.8
166567_f_at	2900027G03Rik			-0.8	-0.7
106222_at	AI447312			-0.8	-1
100127_at	Crabp2	1.5	2.8	-0.8	-0.8
96684_at	Grsf1	1.1	-1.2	-0.8	-0.7
100403_at	My17	3.2	1.3	-0.8	-0.7
100403_at	My17	1.5	-1.1	-0.8	-0.7
92997_g_at	Sox17	-1	-2.2	-0.8	-0.7
98330_at	Zic3	-1	-1.2	-0.8	-0.7
98330_at	Zic3	-1.2	-1.2	-0.8	-0.7
98330_at	Zic3	-1.1	-1.3	-0.8	-0.7
101001_at	5031439A09Rik	1.8	-2.1	-0.7	-0.5
101001_at	5031439A09Rik	-1.2	-1.2	-0.7	-0.5
163902_at	Apln			-0.7	-0.7
102833_at	Cbx2	0	1.3	-0.7	-0.8
101973_at	Cited2			-0.7	-0.7
164692_i_at	Gabarapl1			-0.7	-2.6
97520_s_at	Nnat	1.3	1.1	-0.7	-0.6
94400_at	1110051M20Rik	1.1	-1.1	-0.6	-0.9
113567_at	1810034B16Rik			-0.6	-1.2
109689_at	Agtrl1			-0.6	-0.7
94036_at	Cdc42ep4			-0.6	-1
163796_at	Dact1			-0.6	-0.8
97509_f_at	Fgfr1	1.1	1.2	-0.6	-0.6
97509_f_at	Fgfr1	-1.1	1.5	-0.6	-0.6
98817_at	Fst	1.2	-1.6	-0.6	-1
98852_at	Sall3	1.5	-1.6	-0.6	-0.8
162552_at	2310016C16Rik			-0.5	-0.6
100600_at	Cd24a	1.3	-1.5	-0.5	-0.5
100600_at	Cd24a	2.4	1.3	-0.5	-0.5
100407_at	Gal	1.2	-1.2	-0.5	-0.5
100407_at	Gal	1	-1.1	-0.5	-0.5
103628_at	Lef1	1.2	-1	-0.5	-0.6
103628_at	Lef1	1.1	-1.2	-0.5	-0.6
95016_at	Nrp	-1.5	1.4	-0.5	-0.5
94449_at	Pcdhga12	1.1	1.1	-0.5	-0.6
94449_at	Pcdhga12	-1.8	2	-0.5	-0.6
101451_at	Peg3	1.5	1.1	-0.5	-0.6
93724_at	Ror2			-0.5	-0.9
107154_f_at	---			0.5	2.5
108848_g_at	---			0.5	0.6
116418_at	---			0.5	0.5
129297_at	---			0.5	1.3
130494_f_at	---			0.5	0.5
134932_at	---			0.5	0.5

167758_at	---			0.5	0.7
167843_f_at	1110051B16Rik			0.5	0.6
108022_at	1200002M06Rik			0.5	0.5
110503_at	1500009K05Rik			0.5	0.9
165677_at	1700011I11Rik			0.5	0.5
106204_at	1810013D05Rik			0.5	0.5
167192_at	2700083E18Rik			0.5	0.6
99501_at	3100002M17Rik	-1	-1.2	0.5	0.9
99501_at	3100002M17Rik	1.1	-1.2	0.5	0.9
113265_at	5730455O13Rik			0.5	3.8
162843_at	5730469D23Rik			0.5	0.5
129046_f_at	A330103N21Rik			0.5	1.1
106294_at	AI642036			0.5	0.6
160702_at	BC031468			0.5	0.6
164330_f_at	Bear1			0.5	0.6
110446_at	C130034K06			0.5	3.6
160493_at	Cd63			0.5	0.7
95661_at	Cd9	1.2	1	0.5	0.9
163262_at	Cldn6			0.5	0.5
101963_at	Ctsl	-2.2	-1.2	0.5	0.6
101963_at	Ctsl	1.4	-1	0.5	0.6
101963_at	Ctsl	1.1	1	0.5	0.6
101963_at	Ctsl	1.2	-1	0.5	0.6
97013_f_at	Cyba			0.5	0.5
166740_at	D16Ium22e			0.5	3
103665_at	Elovl6	-1.2	1.1	0.5	0.5
96868_at	Fgb			0.5	2.7
101106_at	G3bp2-pending	1.2	-1.3	0.5	0.6
114749_at	Gpr23			0.5	0.8
106196_at	Htf9c			0.5	1
96269_at	Idi1	-1.1	1	0.5	0.5
166226_f_at	Itm1			0.5	0.9
167118_f_at	Jmj			0.5	0.6
114629_at	Lbc11			0.5	0.6
103377_at	Lrp2			0.5	0.7
103806_at	Lrp5			0.5	2.4
110008_at	Mint-pending			0.5	0.6
116837_at	Myo6			0.5	1.2
94461_at	Pbef-pending	-1.2	-1.2	0.5	0.6
94461_at	Pbef-pending	0	-1.5	0.5	0.6
94461_at	Pbef-pending	-1.1	-1.1	0.5	0.6
96841_at	Pim3	-1	1.2	0.5	0.5
96841_at	Pim3	1.2	-1	0.5	0.5
96841_at	Pim3	1.2	-1.1	0.5	0.5
96841_at	Pim3	-1.3	-1.1	0.5	0.5
103888_at	Rbpms			0.5	0.5
109332_at	Rent1			0.5	0.8
102370_at	Retsdr2-pending	-1.1	-1.1	0.5	0.5
115062_at	Rev11			0.5	1.2
163626_at	Rnasep1			0.5	1.1
162562_at	Rnf128			0.5	0.8
109622_at	Sh3bp4			0.5	0.7

170064_f_at	Slc2a3			0.5	0.6
116003_at	Slc35e3			0.5	0.9
99133_at	Slc3a2	-1.3	1.1	0.5	0.6
99133_at	Slc3a2	1.1	1	0.5	0.6
99133_at	Slc3a2	-1.3	1	0.5	0.6
99133_at	Slc3a2	2.3	-1	0.5	0.6
99133_at	Slc3a2	1.5	1.3	0.5	0.6
99133_at	Slc3a2	-1.3	-1	0.5	0.6
97160_at	Sparc	1.1	1.5	0.5	0.9
97160_at	Sparc	1	1.4	0.5	0.9
97722_at	Ssr1	1.5	-1.2	0.5	0.6
165449_f_at	Ube2j1			0.5	0.7
106064_at	Zdhhc12			0.5	0.5
136554_r_at	---			0.6	1.9
141090_f_at	---			0.6	0.7
161050_at	---			0.6	0.5
168454_f_at	---			0.6	0.6
162704_i_at	0610030G03Rik			0.6	0.9
167853_f_at	1110023P21Rik			0.6	0.8
106475_at	1810060K07Rik			0.6	0.7
132361_at	2210411K11Rik			0.6	0.9
111494_at	2310020P08Rik			0.6	0.6
167237_f_at	2510027N19Rik			0.6	0.9
93569_f_at	2610042L04Rik	2.8	1.2	0.6	0.7
133830_at	2810004A10Rik			0.6	1.1
136134_at	2810403A07Rik			0.6	1.2
102232_at	4833420E20Rik	1	-1.1	0.6	1.3
115752_at	6030443O07Rik			0.6	0.5
103716_at	6430546F08Rik	-1.2	-1.5	0.6	0.7
115792_at	9830148O20Rik			0.6	0.8
106615_at	AA407558			0.6	0.5
104714_at	AA959601	-1	-1.4	0.6	0.7
96781_at	AL023001	1.2	-1.1	0.6	0.5
130491_at	Amn			0.6	1
106292_at	Bcl11a			0.6	1.4
99561_f_at	Cldn7			0.6	0.7
94831_at	Ctsb	-1.6	-1.2	0.6	0.7
94831_at	Ctsb	-1.4	-1.5	0.6	0.7
94831_at	Ctsb	1	-1.4	0.6	0.7
94831_at	Ctsb	-1.1	1.9	0.6	0.7
94831_at	Ctsb	-1.7	1.3	0.6	0.7
101019_at	Ctsc	1.1	-1.1	0.6	0.6
101019_at	Ctsc	1.3	-1	0.6	0.6
104717_at	D5Ert689e	1.5	-1.8	0.6	0.6
170808_s_at	D6Wsu176e			0.6	0.5
98045_s_at	Dab2	-1.2	-1	0.6	0.7
136630_i_at	F11r			0.6	1.2
99378_f_at	H2-Q1	-1.1	1.1	0.6	1.1
99378_f_at	H2-Q1	-1.1	-1.3	0.6	1.1
98627_at	Igfbp2	1.1	-1.8	0.6	0.6
98627_at	Igfbp2	1.1	-1.3	0.6	0.6
93261_at	Lgmn	-1.5	-1.1	0.6	0.9

116312_at	LOC234344			0.6	0.5
168371_f_at	Lrrc5			0.6	0.8
104554_at	Nr2f6	1.2	1.1	0.6	0.5
103502_at	Nrk	1.7	2.8	0.6	0.9
103502_at	Nrk	1.2	1.8	0.6	0.9
101926_at	Pim2	1.5	1.1	0.6	0.5
101926_at	Pim2	1.1	1.2	0.6	0.5
104343_f_at	Pla2g12	1.2	-1.1	0.6	0.5
112828_at	Podxl			0.6	0.6
165599_at	Ranbp2			0.6	0.5
99591_i_at	Rdh11			0.6	0.5
103818_at	Slc7a7	-1.3	1.5	0.6	0.6
97132_at	Soat2	-1	1.1	0.6	0.6
102959_at	Tle4	1.2	1.2	0.6	2.2
161361_s_at	Tnnt1			0.6	1.3
112373_at	Ube2v1			0.6	0.7
95000_g_at	---	-1.1	-1.1	0.7	1.2
165695_at	1810011O16Rik			0.7	0.9
112392_at	1810027I20Rik			0.7	3.7
107491_at	2010204K13Rik			0.7	0.5
115347_at	2700078E11Rik			0.7	0.5
140759_at	4831403C07Rik			0.7	1.4
105273_at	6030405M08Rik			0.7	3.3
93626_at	Abcg2	-1.1	-1.2	0.7	0.9
109133_at	Als2			0.7	0.6
94834_at	Ctsh	-1.3	-1.2	0.7	0.8
160369_at	Dhcr24			0.7	1.1
100479_at	Dnmt3a	1.5	1.2	0.7	0.8
164028_at	Dnmt3b			0.7	0.6
103977_at	F10	1.4	-1.1	0.7	0.5
104419_at	F730017H24Rik	2	-1	0.7	2.9
93785_at	Folr1	-1.3	-1.1	0.7	0.6
93785_at	Folr1	0	1.1	0.7	0.6
165915_i_at	Foxp1			0.7	0.5
114032_f_at	Glcci1			0.7	3.6
101676_at	Gpx3	1	-1.1	0.7	0.7
101676_at	Gpx3	-1.1	-1.1	0.7	0.7
93543_f_at	Gstm1	-1.3	1.1	0.7	0.7
102235_at	Lmyc1	-1.6	-1.2	0.7	0.6
112400_at	mKIAA0182			0.7	0.6
103868_at	Nufip1	1	-1.1	0.7	0.9
108076_at	Nup210			0.7	0.6
95465_s_at	Pr1			0.7	0.8
93953_at	Prss12	2.6	-1.3	0.7	0.6
93953_at	Prss12	1.5	-1.3	0.7	0.6
112405_at	Slc16a3			0.7	0.5
103357_at	Slc2a2	0	-2.1	0.7	0.6
103357_at	Slc2a2	-1.2	-2.3	0.7	0.6
92699_at	Slc7a9			0.7	0.5
139602_at	Tk1			0.7	1.9
167188_at	---			0.8	0.8
167965_f_at	---			0.8	0.6

95518_at	1810015C04Rik			0.8	1.1
109167_at	2400008B06Rik			0.8	0.5
110467_at	2610042L04Rik			0.8	0.5
116635_at	Abca3			0.8	0.8
163015_at	Amn			0.8	0.8
97887_at	Apoc2	-2	0	0.8	0.8
97887_at	Apoc2	1	-1.8	0.8	0.8
97887_at	Apoc2	1	-1.3	0.8	0.8
97887_at	Apoc2	-1.5	-1.1	0.8	0.8
135278_at	Atrx			0.8	4
131000_f_at	BB114266			0.8	0.8
99535_at	Ccrn4l	1.2	-1.1	0.8	0.6
99535_at	Ccrn4l	1	-1.1	0.8	0.6
99535_at	Ccrn4l	1.2	1.1	0.8	0.6
97518_at	Fdft1	-1.1	1.2	0.8	0.7
112922_i_at	Kdelr3			0.8	1.4
92550_at	Krt1-19	1.2	1.2	0.8	1.1
115820_at	Nav1			0.8	0.6
109069_at	Slc40a1			0.8	0.8
160249_at	Tpd52			0.8	0.8
102764_at	Trap1a	1.2	1.2	0.8	1.4
102764_at	Trap1a	3.5	1.2	0.8	1.4
95350_at	Ttr	1.2	1.3	0.8	0.6
108784_at	---			0.9	0.6
133204_at	---			0.9	2.5
137047_at	---			0.9	1.2
165656_i_at	---			0.9	0.9
95954_at	---	-1.1	1	0.9	3.2
130779_f_at	1200003C15Rik			0.9	1.6
113036_at	2310015I10Rik			0.9	0.7
93568_i_at	2610042L04Rik	2.8	1.2	0.9	1
98042_at	4833411K15Rik			0.9	0.8
165601_f_at	9630060C05Rik			0.9	0.9
96094_at	Apoa1	-1	1.4	0.9	0.9
96094_at	Apoa1	-1.2	-1.2	0.9	0.9
96094_at	Apoa1	-1.3	-1.8	0.9	0.9
93840_at	Apom	-1.2	-1.2	0.9	0.9
162690_at	B130036O03			0.9	0.7
160904_at	B230317C12Rik			0.9	0.5
115010_at	BC042513			0.9	1.1
167479_at	Car7			0.9	1.3
92633_at	Ctsz	-2.7	-1.2	0.9	0.9
112955_at	D10Bwg0792e			0.9	0.7
165792_at	Dab2			0.9	1.1
97819_at	Gsto1	-1.2	1.4	0.9	0.5
97444_at	Ifi30	-1.3	1.1	0.9	0.6
97444_at	Ifi30	-1.1	1.1	0.9	0.6
97444_at	Ifi30	-1.4	1.2	0.9	0.6
129147_r_at	Igsf9			0.9	0.7
95511_at	Itga6	-1.1	-2.1	0.9	2.9
100095_at	Scarb1	1.2	1.4	0.9	0.8
103776_at	---	1.1	1.2	1	1.3

129928_f_at	---			1	0.8
113314_at	4833415N24Rik			1	4.3
163489_at	Ankrd3			1	0.7
165359_f_at	Apoa1			1	1
100078_at	Apoa4	-1.1	1.4	1	1.3
100078_at	Apoa4	-1.5	1.2	1	1.3
107498_at	BC019216			1	0.8
104585_at	Crb3	-1.1	1.1	1	0.8
96134_at	Dp111	-3.5	2.4	1	0.8
96771_at	Erbb3	1	1.2	1	0.8
104210_at	Itga3	1.1	1.2	1	1
101561_at	Mt2	-1.1	-1.4	1	0.8
101561_at	Mt2	1.4	1.5	1	0.8
92644_s_at	Myb	1.1	-1.1	1	0.6
92644_s_at	Myb	-1.3	1	1	0.6
101368_at	Pem	-1.1	-1.1	1	0.7
164545_f_at	Pgk1			1	0.9
96047_at	Rbp4	1.4	-1.1	1	1.1
96047_at	Rbp4	2.3	1.7	1	1.1
96047_at	Rbp4	1.8	1.6	1	1.1
96047_at	Rbp4	1.5	1.5	1	1.1
96047_at	Rbp4	2.1	1.2	1	1.1
96047_at	Rbp4	2.4	1.5	1	1.1
96038_at	Rnase4	-1.1	-1.1	1	3.2
108780_at	Tmem2			1	1.3
104990_at	---			1.1	0.7
161626_f_at	---			1.1	1.4
92430_at	1110027L01Rik	1.1	-1.1	1.1	1.6
110309_at	2610028H14Rik			1.1	1.1
96491_at	B130024H06Rik	1.7	-1.8	1.1	0.5
162607_i_at	BC026370			1.1	0.6
167608_f_at	D030016E14Rik			1.1	1.4
115066_at	Dnmt3b			1.1	0.6
111529_at	Gats			1.1	0.7
98000_at	Ly64	1.4	1.2	1.1	1.1
98000_at	Ly64	-2.1	-1.1	1.1	1.1
98000_at	Ly64	1.3	1.3	1.1	1.1
93573_at	Mt1	-1.6	-1	1.1	1.2
93573_at	Mt1	-1.1	-1.3	1.1	1.2
114845_s_at	Pepf-pending			1.1	1
167216_f_at	Prkaca			1.1	0.7
99475_at	Socs2	-1.5	-1.3	1.1	0.8
100499_at	Stx3	-1.2	-1.2	1.1	0.5
100499_at	Stx3	1.4	1.5	1.1	0.5
100499_at	Stx3	-1.1	-1.2	1.1	0.5
135760_at	---			1.2	2.1
168398_f_at	---			1.2	1
95702_at	1300006C19Rik			1.2	0.7
131216_f_at	A1466840			1.2	0.7
112445_at	LOC213048			1.2	0.8
162245_f_at	Myo6			1.2	0.6
138014_at	Nup153			1.2	0.9

162929_at	Sall2			1.2	0.6
103795_f_at	Timd2	-1.7	-1.4	1.2	2.9
115112_at	2510015N06Rik			1.3	3.3
105008_at	2610034N15Rik			1.3	3.2
100009_r_at	Sox2	1.4	1.2	1.3	1.3
171194_at	---			1.4	3.5
97317_at	Enpp2	-1	-1.4	1.5	1.2
97317_at	Enpp2	1.2	-1.5	1.5	1.2
165641_at	Nudt6			1.5	1.3
138408_at	---			1.6	3.1
105198_at	4631416I11Rik			1.6	1.5
93133_at	Slc7a3	1.3	-1.1	1.6	1.4
106577_at	Csna			1.7	0.9
97742_s_at	Fgf8	1.6	-3	1.7	4
111347_at	Gmfb			1.7	0.9
162728_at	Prodh			1.7	1.3
102220_at	Utf1			1.7	1.3
162276_i_at	C1qb			1.8	1.5
164467_f_at	Gjb3			1.8	0.8
102418_at	Tex19			1.8	0.7
160401_r_at	Cnot7			1.9	3
165460_at	Ppap2c			1.9	3.6
168542_f_at	---			2	2.8
161906_f_at	2410022L05Rik			2	1
166030_i_at	4921525L17Rik			2	5.3
112209_at	2410003B16Rik			2.2	2.9
111359_at	6330407P03Rik			2.3	2.3
165935_at	2010003K15Rik			2.4	1.1
134223_at	---			2.5	3.3
129326_at	---			2.6	1.3
168426_f_at	Crb3			2.7	3.6
134260_at	---			2.8	2.7
108516_at	0610011L13Rik			2.8	1
129347_at	2900024N03Rik			2.8	2.1
133037_at	Pex7			2.8	1.3
97413_at	1600029D21Rik	-1.1	-1.5	3	0.7
162869_at	Enc1			3	1
130994_at	Nkd2			3	1.7
113431_at	Rnf14			3	3.7
128830_r_at	6330403E24Rik			3.1	3.4
132794_at	---			3.3	0.9
166437_f_at	Fzd8			3.4	3.3
167004_r_at	D830007F02Rik			3.5	4
107621_at	D7Ert458e			3.8	0.5
165956_f_at	2310002A05Rik			4.4	0.8
168503_at	---			4.6	2.7
165637_i_at	2610034E18Rik			4.6	4.4
170625_i_at	5730536A07Rik			4.7	0.5

The Affymetrix ID (MGU74v2 probe set ID), Gene symbol, signal  $\log_2$  ratios for E6.0 and E6.5  $\beta$ -catenin homozygous null mutants and signal  $\log_2$  ratios for both conditional  $\beta$ -catenin mutant (CKO) comparisons. Note that redundant probe set IDs appear because the  $\beta$ -catenin homozygous null mutants data was collected with the Mu11k platform that contains multiple probe sets that map to only one probe set on the MGU74v2 arrays.



