

**Table S1.** Genes upregulated more than 1.7-fold in homozygous *Sd* embryos at embryonic day 10.0

wt_homo_log2	Gene Symbol	Gene Name
-2.292604532	<i>Wfdc3</i>	WAP four-disulfide core domain 3
-2.068914981	<i>Cpa1</i>	carboxypeptidase A1
-1.886434916	<i>Ptf1a</i>	pancreas specific transcription factor, 1a
-1.726093968	<i>Unc13c</i>	unc-13 homolog C ( <i>C. elegans</i> )
-1.689349507	<i>Fancg</i>	Fanconi anemia, complementation group G
-1.568837495	<i>Saps2</i>	SAPS domain family, member 2
-1.50710034	<i>Nhsl1</i>	NHS-like 1
-1.450641448	<i>Gp1bb</i>	glycoprotein Ib, beta polypeptide"
-1.388891015	<i>Rph3al</i>	rabphilin 3A-like (without C2 domains)
-1.325300288	<i>Pramef12</i>	PRAME family member 12
-1.29461986	<i>Frmd4a</i>	FERM domain containing 4A
-1.223918877	<i>Car7</i>	carbonic anhydrase 7
-1.221578043	<i>Ikzf2</i>	IKAROS family zinc finger 2
-1.125159242	<i>Nr1d1</i>	nuclear receptor subfamily 1, group D, member 1
-1.107857958	<i>4930539N22Rik</i>	RIKEN cDNA 4930539N22 gene
-1.075506995	<i>A530054K11Rik</i>	RIKEN cDNA A530054K11 gene
-1.063980849	<i>Ugt2b34</i>	UDP glucuronosyltransferase 2 family, polypeptide B34"
-1.049819633	<i>Cyp3a11</i>	cytochrome P450, family 3, subfamily a, polypeptide 11"
-1.034717782	<i>Kirrel2</i>	kin of IRRE like 2 ( <i>Drosophila</i> )
-1.027210927	<i>Slc38a9</i>	solute carrier family 38, member 9
-1.022209956	<i>Luc7l2</i>	LUC7-like 2 ( <i>S. cerevisiae</i> )
-1.011919634	<i>Abcb1b</i>	ATP-binding cassette, sub-family B (MDR/TAP), member 1B"
-1.011841065	<i>Lhx1</i>	LIM homeobox protein 1
-0.964093392	<i>Sipa111</i>	signal-induced proliferation-associated 1 like 1
-0.943349826	<i>Slc6a16</i>	solute carrier family 6, member 16
-0.942660843	<i>Mgam</i>	maltase-glucoamylase
-0.940246568	<i>N4bp2l2</i>	NEDD4 binding protein 2-like 2
-0.924019703	<i>Nsun6</i>	NOL1/NOP2/Sun domain family member 6
-0.92029978	<i>3830417A13Rik</i>	RIKEN cDNA 3830417A13 gene
-0.917571744	<i>Ank2</i>	ankyrin 2, brain"
-0.898814256	<i>1600015110Rik</i>	RIKEN cDNA 1600015110 gene
-0.890764689	<i>LOC639910</i>	hypothetical protein LOC639910
-0.889616747	<i>Madcam1</i>	mucosal vascular addressin cell adhesion molecule 1
-0.887704018	<i>Igsf11</i>	immunoglobulin superfamily, member 11
-0.885761887	<i>Sectm1b</i>	secreted and transmembrane 1B
-0.881250083	<i>Olfir870</i>	olfactory receptor 870
-0.865447187	<i>6530418L21Rik</i>	RIKEN cDNA 6530418L21 gene
-0.864747648	<i>Mbnl2</i>	muscleblind-like 2
-0.864663626	<i>Cnksr2</i>	connector enhancer of kinase suppressor of Ras 2
-0.86407026	<i>5730409L17Rik</i>	RIKEN cDNA 5730409L17 gene
-0.862564645	<i>Olfir1441</i>	olfactory receptor 1441
-0.856683291	<i>Acot4</i>	acyl-CoA thioesterase 4
-0.854986982	<i>Rbpjl</i>	recombination signal binding protein for immunoglobulin kappa J region-like
-0.848077744	<i>Slc35d3</i>	solute carrier family 35, member D3"
-0.84462546	<i>Upk1a</i>	uroplakin 1A
-0.84351152	<i>Anxa7</i>	annexin A7
-0.842885702	<i>Hrg</i>	histidine-rich glycoprotein
-0.827769998	<i>Ly6g5c</i>	lymphocyte antigen 6 complex, locus G5C"
-0.826120079	<i>Gpr152</i>	G protein-coupled receptor 152
-0.822110043	<i>9130022E09</i>	hypothetical 9130022E09
-0.820070174	<i>Taar4</i>	trace amine-associated receptor 4
-0.807713561	<i>A230072E10Rik</i>	RIKEN cDNA A230072E10 gene
-0.796918159	<i>Lhx9</i>	LIM homeobox protein 9
-0.795244306	<i>Cybrd1</i>	cytochrome b reductase 1
-0.79479939	<i>Olfir1419</i>	olfactory receptor 1419
-0.789249795	<i>Veph1</i>	ventricular zone expressed PH domain homolog 1 (zebrafish)
-0.787280139	<i>Fv1</i>	Friend virus susceptibility 1
-0.782511125	<i>Taok2</i>	TAO kinase 2
-0.781628273	<i>Tgm5</i>	transglutaminase 5
-0.77680897	<i>RP23-212C14.7</i>	keratin associated protein 9 family member
-0.776441136	<i>Prm2</i>	protamine 2
-0.771651592	<i>Cdcp1</i>	CUB domain containing protein 1
-0.768768275	<i>Adrb1</i>	adrenergic receptor, beta 1"
-0.76817615	<i>Tmem89</i>	transmembrane protein 89
-0.767808688	<i>Sfxn3</i>	sideroflexin 3
-0.766146098	<i>Rhox6</i>	reproductive homeobox 6