

Supplementary Table S5: Gene Ontology Comparative Analysis according to biological process (FDR<0.05) in SA1-null and *Nipbl*-heterozygous MEFs. GO terms common in both models are shown in bold.

SA1-null MEFs

GO TERM	Description	FDR
<i>Skeletal and bone development</i>		
GO:0001501	<i>skeletal system development</i>	5.92E-04
GO:0001503	ossification	1.60E-02
GO:0048706	<i>embryonic skeletal system development</i>	1.81E-02
GO:0048705	<i>skeletal system morphogenesis</i>	2.13E-02
GO:0060348	bone development	3.15E-02
GO:0045667	regulation of osteoblast differentiation	4.53E-02
GO:0060173	limb development	3.85E-03
GO:0035108	limb morphogenesis	3.96E-03
GO:0030326	embryonic limb morphogenesis	7.83E-03
<i>Morphogenesis</i>		
GO:0001763	<i>morphogenesis of a branching structure</i>	1.11E-02
GO:0048598	embryonic morphogenesis	1.11E-02
GO:0043009	chordate embryonic development	1.60E-02
GO:0035239	tube morphogenesis	1.76E-02
GO:0048754	branching morphogenesis of a tube	1.81E-02
GO:0009792	<i>embryo development ending in birth or egg hatching</i>	1.81E-02
GO:0048729	tissue morphogenesis	4.07E-02
<i>Translation</i>		
GO:0006412	<i>translation</i>	3.11E-03
GO:0045947	negative regulation of translational initiation	4.00E-02
<i>Heart & Lung development</i>		
GO:0007507	heart development	1.11E-02
GO:0060541	respiratory system development	3.15E-02
GO:0030324	lung development	4.19E-02
GO:0030323	respiratory tube development	4.53E-02
<i>Lipid metabolism</i>		
GO:0008610	lipid biosynthetic process	4.53E-02

Nipbl-heterozygous MEFs

GO TERM	Description	FDR
<i>Skeletal and bone development</i>		
GO:0001501	skeletal system development	1.24E-02
GO:0048706	embryonic skeletal system development	4.43E-02
GO:0007519	skeletal muscle tissue development	4.58E-02
GO:0002051	osteoblast fate commitment	3.42E-02
GO:0048705	skeletal system morphogenesis	1.57E-02
<i>Morphogenesis</i>		
GO:0009792	embryo development ending in birth or egg hatching	4.87E-02
GO:0009880	embryonic pattern specification	4.91E-02
GO:0001763	morphogenesis of a branching structure	3.82E-02
GO:0031645	negative regulation of neurological system process	2.22E-02
GO:0007389	pattern specification process	2.80E-02
<i>Translation</i>		
GO:0006412	translation	1.07E-02
GO:0043039	tRNA aminoacylation	1.02E-02
<i>Heart & Lung development</i>		
GO:0002027	regulation of heart rate	2.20E-02
GO:0042310	vasoconstriction	3.51E-03
GO:0010460	positive regulation of heart rate	8.84E-03
GO:0045823	positive regulation of heart contraction	1.21E-02
GO:0045907	positive regulation of vasoconstriction	1.45E-02
GO:0045777	positive regulation of blood pressure	1.77E-02
<i>Lipid metabolism</i>		
GO:0050873	brown fat cell differentiation	1.32E-03
GO:0044255	cellular lipid metabolic process	2.24E-03
GO:0046889	positive regulation of lipid biosynthetic process	1.45E-02
GO:0050872	white fat cell differentiation	1.68E-02
GO:0019217	regulation of fatty acid metabolic process	3.31E-02
GO:0045834	positive regulation of lipid metabolic process	3.53E-02
GO:0045444	fat cell differentiation	3.74E-02