

Table S2 : List of diseases and/or biological functions based on peptide phosphorylation in Cdkn2a +/+ and -/- primary adipocytes.

Categories	Diseases or Functions Annotation	pValue	Predicted Activation z-Flags	Molecules	# Molecules	
Developmental Disorder	Hypertrophy	0.00000000	Increased	2.516	ADRB2,AR,CACNA1C,CDKN1A,CFTR,CRK1B1,ESR1,FOXO3,FXR1,MAP2K1,MYBP3,NCF1,NFKB1,NOS3,PDE5A,PRKCB	16
Cardiovascular Disease, Developmental Disorder, Organismal Injury and Abnormalities	Hypertrophy of heart	0.00000004	Increased	2.569	ADRB2,CACNA1C,CDKN1A,CRK1B1,FXR1,MAP2K1,MYBP3,NCF1,NFKB1,NOS3,PDE5A,PRKCB	12
Developmental Disorder, Skeletal and Muscular Disorders	muscular hypertrophy	0.00000015		0.256	ADRB2,AR,FOXO3,MYBP3,NCF1,NFKB1,NOS3,PDE5A	8
Developmental Disorder	hypertrophy of tissue	0.00000036		0.539	ADRB2,AR,ESR1,FOXO3,MYBP3,NCF1,NFKB1,NOS3,PDE5A	9
Developmental Disorder, Embryonic Development, Organismal Development, Tissue Morphology	abnormal morphology of embryonic tissue	0.00000044			AR,AURKA,CACNA1C,CDC25A,CDKN1A,CFR1,DCX,DSF,ERBB2,ESR1,MAP2K1,MTOR,PTPN12,RAF1,RB1,RBL2	16
Developmental Disorder	hypertrophy of cells	0.00000178		0.539	ADRB2,AR,ESR1,FOXO3,MYBP3,NCF1,NFKB1,NOS3,PDE5A	9
Developmental Disorder	dysplasia of epithelial tissue	0.00000074			ESR1,RB1,RBL2	3
Developmental Disorder	Growth Failure	0.0000425	Increased	2.936	AURKA,CDC25A,CDKN1A,CFTR,CSF3R,MTOR,NFKB1,NOS3,PTPN12,RAF1,RB1,RBL2	12
Cardiovascular Disease, Developmental Disorder, Organismal Injury and Abnormalities, Skeletal and Muscular Disorders	hypertrophy of cardiac muscle	0.000226		1.067	MYBP3,NCF1,NFKB1,PDE5A	4
Developmental Disorder, Organismal Injury and Abnormalities, Reproductive System Disease	hypertrophy of uterus	0.000238			AR,ESR1	2
Developmental Disorder	dysplasia	0.000305		0.991	ESR1,RB1,RBL2,RPS6	4