

Supplementary material 3

Trageted cell processes

RelationSymbolicName	ObjectType	Effect	RelationNumberOfReferences
Cell proliferation			
Regulation: MAPK14 ---> cell proliferation	Regulation		540
positive Regulation: MAPK14 --+> cell proliferation	Regulation	positive	324
positive Regulation: SPP1 --+> cell proliferation	Regulation	positive	269
Regulation: TGFB2 ---> cell proliferation	Regulation		252
positive Regulation: GLI1 --+> cell proliferation	Regulation	positive	176
Regulation: NOS2 ---> cell proliferation	Regulation		158
positive Regulation: F2R --+> cell proliferation	Regulation	positive	142
negative Regulation: SOD2 --- cell proliferation	Regulation	negative	98
positive Regulation: ANG --+> cell proliferation	Regulation	positive	79
Regulation: FST ---> cell proliferation	Regulation		75
negative Regulation: PHB --- cell proliferation	Regulation	negative	70
Regulation: GNL3 ---> cell proliferation	Regulation		55
Regulation: SMAD1 ---> cell proliferation	Regulation		48
positive Regulation: KCNH1 --+> cell proliferation	Regulation	positive	47
Regulation: TSPO ---> cell proliferation	Regulation		46
positive Regulation: ESRRA --+> cell proliferation	Regulation	positive	41
positive Regulation: SMAD5 --+> cell proliferation	Regulation	positive	38
positive Regulation: PROK1 --+> cell proliferation	Regulation	positive	37
Regulation: CHKA ---> cell proliferation	Regulation		36
Regulation: BAG1 ---> cell proliferation	Regulation		35
Regulation: MYF5 ---> cell proliferation	Regulation		33
Regulation: S1PR2 ---> cell proliferation	Regulation		32
positive Regulation: SEMA4D --+> cell proliferation	Regulation	positive	28
negative Regulation: CCNG1 --- cell proliferation	Regulation	negative	27
positive Regulation: LPAR2 --+> cell proliferation	Regulation	positive	25
positive Regulation: GNA12 --+> cell proliferation	Regulation	positive	24
positive Regulation: MEF2C --+> cell proliferation	Regulation	positive	24
negative Regulation: ABCA1 --- cell proliferation	Regulation	negative	23

positive Regulation: GNAI1 --+> cell proliferation	Regulation	positive	22
Regulation: MEF2A ---> cell proliferation	Regulation		21
Regulation: SMARCA2 ---> cell proliferation	Regulation		21
positive Regulation: PTAFR --+> cell proliferation	Regulation	positive	21
positive Regulation: SAA1 --+> cell proliferation	Regulation	positive	20
Regulation: REST ---> cell proliferation	Regulation		19
Regulation: PRKG1 ---> cell proliferation	Regulation		19
positive Regulation: GFER --+> cell proliferation	Regulation	positive	18
positive Regulation: CHRM3 --+> cell proliferation	Regulation	positive	18
positive Regulation: MCAM --+> cell proliferation	Regulation	positive	15
positive Regulation: ARG2 --+> cell proliferation	Regulation	positive	13
positive Regulation: TPD52 --+> cell proliferation	Regulation	positive	12
negative Regulation: KLF11 --- cell proliferation	Regulation	negative	11
negative Regulation: PLCB1 --- cell proliferation	Regulation	negative	11
Regulation: GRB10 ---> cell proliferation	Regulation		11
Regulation: PRKAA1 ---> cell proliferation	Regulation		11
negative Regulation: NOS2 --- cell proliferation	Regulation	negative	10
positive Regulation: HOXB9 --+> cell proliferation	Regulation	positive	10
negative Regulation: HOXB13 --- cell proliferation	Regulation	negative	10
Regulation: SKI ---> cell proliferation	Regulation		10
Regulation: PAK3 ---> cell proliferation	Regulation		9
Regulation: ALKBH3 ---> cell proliferation	Regulation		9
negative Regulation: TP53BP1 --- cell proliferation	Regulation	negative	9
negative Regulation: MAP1LC3B --- cell proliferation	Regulation	negative	9
Regulation: NFATC3 ---> cell proliferation	Regulation		9
negative Regulation: RPS14 --- cell proliferation	Regulation	negative	9
negative Regulation: FOSL2 --- cell proliferation	Regulation	negative	9
Regulation: HNRNPD ---> cell proliferation	Regulation		9
Regulation: KCNQ1 ---> cell proliferation	Regulation		8
positive Regulation: BCAT1 --+> cell proliferation	Regulation	positive	7
Regulation: TNFRSF25 ---> cell proliferation	Regulation		7
positive Regulation: CHD7 --+> cell proliferation	Regulation	positive	7
positive Regulation: EIF3I --+> cell proliferation	Regulation	positive	7
positive Regulation: TLR1 --+> cell proliferation	Regulation	positive	7
negative Regulation: TMSB10 --- cell proliferation	Regulation	negative	6

positive Regulation: EDIL3 --> cell proliferation	Regulation	positive	6
Regulation: CUL3 ---> cell proliferation	Regulation		6
positive Regulation: CPE --> cell proliferation	Regulation	positive	6
negative Regulation: MAL --- cell proliferation	Regulation	negative	5
Regulation: SMG1 ---> cell proliferation	Regulation		5
Regulation: STK39 ---> cell proliferation	Regulation		5
negative Regulation: NPRL2 --- cell proliferation	Regulation	negative	5
positive Regulation: ABCB6 --> cell proliferation	Regulation	positive	5
Regulation: PEG3 ---> cell proliferation	Regulation		5
positive Regulation: B4GALT1 --> cell proliferation	Regulation	positive	5
Regulation: PPARGC1B ---> cell proliferation	Regulation		5
positive Regulation: RPL29 --> cell proliferation	Regulation	positive	5
positive Regulation: CSNK1E --> cell proliferation	Regulation	positive	4
Regulation: FOXJ1 ---> cell proliferation	Regulation		4
positive Regulation: NUDT1 --> cell proliferation	Regulation	positive	4
positive Regulation: VAMP8 --> cell proliferation	Regulation	positive	4
negative Regulation: ABI3BP --- cell proliferation	Regulation	negative	4
Regulation: LAMA5 ---> cell proliferation	Regulation		4
positive Regulation: JADE1 --> cell proliferation	Regulation	positive	4
positive Regulation: RSL1D1 --> cell proliferation	Regulation	positive	4
Regulation: MGP ---> cell proliferation	Regulation		4
Regulation: PMAIP1 ---> cell proliferation	Regulation		4
positive Regulation: GGCT --> cell proliferation	Regulation	positive	3
Regulation: TPD52L1 ---> cell proliferation	Regulation		3
positive Regulation: PLXDC2 --> cell proliferation	Regulation	positive	3
Regulation: KIF2A ---> cell proliferation	Regulation		3
Regulation: SLC2A5 ---> cell proliferation	Regulation		3
Regulation: KCNIP3 ---> cell proliferation	Regulation		3
positive Regulation: TRAPPC4 --> cell proliferation	Regulation	positive	3
positive Regulation: MAFK --> cell proliferation	Regulation	positive	3
Regulation: UBE2V1 ---> cell proliferation	Regulation		3
Regulation: CALM1 ---> cell proliferation	Regulation		3
negative Regulation: FAM107A --- cell proliferation	Regulation	negative	3
negative Regulation: BEX1 --- cell proliferation	Regulation	negative	3
Regulation: GUCY1A3 ---> cell proliferation	Regulation		3

positive Regulation: IL22RA1 --> cell proliferation	Regulation	positive	3
Regulation: SERPIND1 ---> cell proliferation	Regulation		3
Regulation: RBM17 ---> cell proliferation	Regulation		3
Regulation: DMD ---> cell proliferation	Regulation		3
positive Regulation: CAPN6 --> cell proliferation	Regulation	positive	3
negative Regulation: ILKAP --- cell proliferation	Regulation	negative	3
Regulation: EML4 ---> cell proliferation	Regulation		3
Regulation: KMT2E ---> cell proliferation	Regulation		2
negative Regulation: ZFP36L2 --- cell proliferation	Regulation	negative	2
negative Regulation: LAMA2 --- cell proliferation	Regulation	negative	2
Regulation: F2RL2 ---> cell proliferation	Regulation		2
Regulation: MACF1 ---> cell proliferation	Regulation		2
Regulation: SLCO2A1 ---> cell proliferation	Regulation		2
Regulation: TRIM37 ---> cell proliferation	Regulation		2
positive Regulation: BRF2 --> cell proliferation	Regulation	positive	2
Regulation: MLX ---> cell proliferation	Regulation		2
Regulation: GDF10 ---> cell proliferation	Regulation		2
negative Regulation: HN1 --- cell proliferation	Regulation	negative	2
positive Regulation: NKX2-2 --> cell proliferation	Regulation	positive	2
Regulation: HMCN1 ---> cell proliferation	Regulation		2
Regulation: RPS3 ---> cell proliferation	Regulation		2
positive Regulation: SLC31A1 --> cell proliferation	Regulation	positive	2
negative Regulation: KPNA1 --- cell proliferation	Regulation	negative	2
Regulation: BICC1 ---> cell proliferation	Regulation		2
negative Regulation: RBMS3 --- cell proliferation	Regulation	negative	2
Regulation: STK17B ---> cell proliferation	Regulation		2
Regulation: ZBTB18 ---> cell proliferation	Regulation		2

Apoptosis

positive Regulation: MAPK14 --> apoptosis	Regulation	positive	743
Regulation: NOS2 ---> apoptosis	Regulation		652
negative Regulation: SOD2 --- apoptosis	Regulation	negative	353
positive Regulation: PMAIP1 --> apoptosis	Regulation	positive	257
Regulation: SPP1 ---> apoptosis	Regulation		203
negative Regulation: BAG1 --- apoptosis	Regulation	negative	172

Regulation: TSPO ---> apoptosis	Regulation	94
Regulation: TGFB2 ---> apoptosis	Regulation	91
Regulation: PHB ---> apoptosis	Regulation	83
Regulation: F2R ---> apoptosis	Regulation	77
negative Regulation: GLI1 --- apoptosis	Regulation negative	59
positive Regulation: TNFRSF25 --+> apoptosis	Regulation positive	51
Regulation: MEF2A ---> apoptosis	Regulation	42
Regulation: PTAFR ---> apoptosis	Regulation	40
positive Regulation: STK17B --+> apoptosis	Regulation positive	32
positive Regulation: CCNG1 --+> apoptosis	Regulation positive	31
Regulation: ABCA1 ---> apoptosis	Regulation	28
Regulation: MAP1LC3B ---> apoptosis	Regulation	28
Regulation: FST ---> apoptosis	Regulation	27
positive Regulation: KCNIP3 --+> apoptosis	Regulation positive	26
Regulation: ANG ---> apoptosis	Regulation	24
negative Regulation: MEF2C --- apoptosis	Regulation negative	21
Regulation: SAA1 ---> apoptosis	Regulation	21
Regulation: RPS3 ---> apoptosis	Regulation	21
positive Regulation: TP53BP1 --+> apoptosis	Regulation positive	21
positive Regulation: IP6K2 --+> apoptosis	Regulation positive	20
negative Regulation: GFER --- apoptosis	Regulation negative	19
negative Regulation: REST --- apoptosis	Regulation negative	18
positive Regulation: PEG3 --+> apoptosis	Regulation positive	18
Regulation: RPS14 ---> apoptosis	Regulation	18
positive Regulation: KLF11 --+> apoptosis	Regulation positive	17
positive Regulation: GNA12 --+> apoptosis	Regulation positive	16
Regulation: EDIL3 ---> apoptosis	Regulation	15
negative Regulation: SMAD5 --- apoptosis	Regulation negative	15
Regulation: TMSB10 ---> apoptosis	Regulation	15
positive Regulation: S1PR2 --+> apoptosis	Regulation positive	15
Regulation: GRB10 ---> apoptosis	Regulation	15
negative Regulation: PRKAA1 --- apoptosis	Regulation negative	14
negative Regulation: LPAR2 --- apoptosis	Regulation negative	14
negative Regulation: SMAD1 --- apoptosis	Regulation negative	14
negative Regulation: GNL3 --- apoptosis	Regulation negative	14

positive Regulation: SEMA4D --+> apoptosis	Regulation positive	13
Regulation: ARG2 ---> apoptosis	Regulation	12
negative Regulation: ESRRRA --- apoptosis	Regulation negative	12
Regulation: TRIM63 ---> apoptosis	Regulation	11
negative Regulation: CHRM3 --- apoptosis	Regulation negative	11
negative Regulation: PAK3 --- apoptosis	Regulation negative	11
Regulation: STEAP3 ---> apoptosis	Regulation	11
negative Regulation: CHKA --- apoptosis	Regulation negative	10
positive Regulation: B4GALT1 --+> apoptosis	Regulation positive	9
Regulation: PRKG1 ---> apoptosis	Regulation	9
negative Regulation: MCAM --- apoptosis	Regulation negative	8
positive Regulation: NOS2 --+> apoptosis	Regulation positive	8
positive Regulation: ABCC8 --+> apoptosis	Regulation positive	8
negative Regulation: LAMP2 --- apoptosis	Regulation negative	8
negative Regulation: SMG1 --- apoptosis	Regulation negative	8
negative Regulation: CA4 --- apoptosis	Regulation negative	8
positive Regulation: NFATC3 --+> apoptosis	Regulation positive	8
negative Regulation: CAPN6 --- apoptosis	Regulation negative	8
positive Regulation: NPRL2 --+> apoptosis	Regulation positive	8
Regulation: CPE ---> apoptosis	Regulation	7
Regulation: FOSL2 ---> apoptosis	Regulation	7
positive Regulation: TLR1 --+> apoptosis	Regulation positive	7
Regulation: TPD52 ---> apoptosis	Regulation	7
positive Regulation: JADE1 --+> apoptosis	Regulation positive	7
positive Regulation: UACA --+> apoptosis	Regulation positive	7
positive Regulation: BEX1 --+> apoptosis	Regulation positive	6
negative Regulation: ITGB1BP2 --- apoptosis	Regulation negative	6
Regulation: DMD ---> apoptosis	Regulation	6
Regulation: SMARCA2 ---> apoptosis	Regulation	6
negative Regulation: PROK1 --- apoptosis	Regulation negative	6
positive Regulation: PPP1CC --+> apoptosis	Regulation positive	5
negative Regulation: GHITM --- apoptosis	Regulation negative	5
negative Regulation: ALKBH3 --- apoptosis	Regulation negative	5
positive Regulation: STK39 --+> apoptosis	Regulation positive	5
positive Regulation: MGP --+> apoptosis	Regulation positive	5

Regulation: TOMM22 ---> apoptosis	Regulation	5
Regulation: DPF2 ---> apoptosis	Regulation	4
positive Regulation: HOXB13 --+> apoptosis	Regulation positive	4
Regulation: PLCB1 ---> apoptosis	Regulation	4
Regulation: MMP15 ---> apoptosis	Regulation	4
positive Regulation: MAL --+> apoptosis	Regulation positive	4
negative Regulation: GNAI1 --- apoptosis	Regulation negative	4
positive Regulation: HNRNPD --+> apoptosis	Regulation positive	4
negative Regulation: PPARGC1B --- apoptosis	Regulation negative	3
Regulation: NSMAF ---> apoptosis	Regulation	3
positive Regulation: FAM107A --+> apoptosis	Regulation positive	3
Regulation: CSNK1E ---> apoptosis	Regulation	3
Regulation: UBE2V1 ---> apoptosis	Regulation	3
negative Regulation: KCNH1 --- apoptosis	Regulation negative	3
Regulation: GK ---> apoptosis	Regulation	3
Regulation: LAMA2 ---> apoptosis	Regulation	3
Regulation: CDC27 ---> apoptosis	Regulation	3
Regulation: RPL29 ---> apoptosis	Regulation	3
Regulation: BCAT1 ---> apoptosis	Regulation	3
Regulation: DPYD ---> apoptosis	Regulation	3
positive Regulation: ILKAP --+> apoptosis	Regulation positive	3
Regulation: CALM1 ---> apoptosis	Regulation	2
Regulation: CUL3 ---> apoptosis	Regulation	2
Regulation: GGCT ---> apoptosis	Regulation	2
Regulation: TAB2 ---> apoptosis	Regulation	2
negative Regulation: PRPS2 --- apoptosis	Regulation negative	2
Regulation: RBM17 ---> apoptosis	Regulation	2
Regulation: SYPL2 ---> apoptosis	Regulation	2
positive Regulation: RSL1D1 --+> apoptosis	Regulation positive	2
Regulation: ABHD5 ---> apoptosis	Regulation	2
Regulation: ABCB6 ---> apoptosis	Regulation	2
Regulation: LAMA5 ---> apoptosis	Regulation	2
Regulation: ZFP36L2 ---> apoptosis	Regulation	2
positive Regulation: SLC31A1 --+> apoptosis	Regulation positive	2
Regulation: KCNQ1 ---> apoptosis	Regulation	2

Cell differentiation

Regulation: MAPK14 ---> cell differentiation	Regulation	452
Regulation: SPP1 ---> cell differentiation	Regulation	138
Regulation: TGFB2 ---> cell differentiation	Regulation	125
positive Regulation: MEF2A --> cell differentiation	Regulation positive	119
Regulation: MYF5 ---> cell differentiation	Regulation	109
positive Regulation: TGFB2 --> cell differentiation	Regulation positive	105
Regulation: NKX2-2 ---> cell differentiation	Regulation	98
Regulation: SMAD1 ---> cell differentiation	Regulation	86
Regulation: MEF2C ---> cell differentiation	Regulation	84
Regulation: FST ---> cell differentiation	Regulation	70
negative Regulation: REST --- cell differentiation	Regulation negative	61
Regulation: GLI1 ---> cell differentiation	Regulation	50
positive Regulation: SMAD5 --> cell differentiation	Regulation positive	46
Regulation: NOS2 ---> cell differentiation	Regulation	44
positive Regulation: SOD2 --> cell differentiation	Regulation positive	37
Regulation: PLCB1 ---> cell differentiation	Regulation	35
positive Regulation: ESRRA --> cell differentiation	Regulation positive	31
negative Regulation: MGP --- cell differentiation	Regulation negative	28
positive Regulation: FOXJ1 --> cell differentiation	Regulation positive	24
positive Regulation: F2R --> cell differentiation	Regulation positive	23
Regulation: SEMA4D ---> cell differentiation	Regulation	23
positive Regulation: SAA1 --> cell differentiation	Regulation positive	22
Regulation: PHB ---> cell differentiation	Regulation	16
positive Regulation: BAG1 --> cell differentiation	Regulation positive	16
Regulation: S1PR2 ---> cell differentiation	Regulation	15
positive Regulation: NFATC3 --> cell differentiation	Regulation positive	14
positive Regulation: SMARCA2 --> cell differentiation	Regulation positive	14
negative Regulation: CHKA --- cell differentiation	Regulation negative	12
positive Regulation: PROK1 --> cell differentiation	Regulation positive	12
positive Regulation: HOXB13 --> cell differentiation	Regulation positive	12
positive Regulation: TSPO --> cell differentiation	Regulation positive	12
Regulation: SPON1 ---> cell differentiation	Regulation	11
positive Regulation: MAFK --> cell differentiation	Regulation positive	11

Regulation: GNL3 ---> cell differentiation	Regulation	11
Regulation: RPS14 ---> cell differentiation	Regulation	10
positive Regulation: GLI1 --+> cell differentiation	Regulation positive	10
Regulation: PRKG1 ---> cell differentiation	Regulation	10
Regulation: GPD1 ---> cell differentiation	Regulation	10
Regulation: LAMA5 ---> cell differentiation	Regulation	9
Regulation: DMD ---> cell differentiation	Regulation	9
positive Regulation: SKI --+> cell differentiation	Regulation positive	9
positive Regulation: KMT2E --+> cell differentiation	Regulation positive	8
Regulation: GNA12 ---> cell differentiation	Regulation	8
positive Regulation: GDF10 --+> cell differentiation	Regulation positive	8
positive Regulation: LAMA2 --+> cell differentiation	Regulation positive	7
Regulation: FOSL2 ---> cell differentiation	Regulation	7
positive Regulation: HOXB9 --+> cell differentiation	Regulation positive	7
Regulation: PPARGC1B ---> cell differentiation	Regulation	6
positive Regulation: PAK3 --+> cell differentiation	Regulation positive	6
Regulation: GRB10 ---> cell differentiation	Regulation	6
positive Regulation: MCAM --+> cell differentiation	Regulation positive	6
positive Regulation: RBFOX1 --+> cell differentiation	Regulation positive	5
positive Regulation: MAL --+> cell differentiation	Regulation positive	5
Regulation: GNAI1 ---> cell differentiation	Regulation	5
Regulation: KPNA1 ---> cell differentiation	Regulation	5
Regulation: PEG3 ---> cell differentiation	Regulation	5
negative Regulation: PTAFR --- cell differentiation	Regulation negative	5
Regulation: TBX15 ---> cell differentiation	Regulation	5
Regulation: BEX1 ---> cell differentiation	Regulation	4
Regulation: ZBTB18 ---> cell differentiation	Regulation	4
Regulation: B4GALT1 ---> cell differentiation	Regulation	4
Regulation: STK39 ---> cell differentiation	Regulation	4
Regulation: GPR126 ---> cell differentiation	Regulation	4
Regulation: CHD7 ---> cell differentiation	Regulation	4
Regulation: KLF11 ---> cell differentiation	Regulation	4
positive Regulation: LPAR2 --+> cell differentiation	Regulation positive	4
Regulation: PRKAA1 ---> cell differentiation	Regulation	4
positive Regulation: ABCB6 --+> cell differentiation	Regulation positive	4

Regulation: RPL29 ---> cell differentiation	Regulation		4
Regulation: KCNH1 ---> cell differentiation	Regulation		4
Regulation: TNFRSF25 ---> cell differentiation	Regulation		3
Regulation: EDIL3 ---> cell differentiation	Regulation		3
Regulation: HACD1 ---> cell differentiation	Regulation		3
Regulation: BCAT1 ---> cell differentiation	Regulation		3
Regulation: EIF3I ---> cell differentiation	Regulation		3
Regulation: SLC2A5 ---> cell differentiation	Regulation		3
Regulation: MLX ---> cell differentiation	Regulation		3
Regulation: CUL3 ---> cell differentiation	Regulation		3
Regulation: UBE2V1 ---> cell differentiation	Regulation		3
positive Regulation: ABCA1 --+> cell differentiation	Regulation	positive	3
Regulation: PPP1CC ---> cell differentiation	Regulation		2
Regulation: MMP15 ---> cell differentiation	Regulation		2
positive Regulation: ABI3BP --+> cell differentiation	Regulation	positive	2
Regulation: DUSP13 ---> cell differentiation	Regulation		2
Regulation: CHRM3 ---> cell differentiation	Regulation		2
positive Regulation: TRIM63 --+> cell differentiation	Regulation	positive	2
Regulation: KCNIP3 ---> cell differentiation	Regulation		2
Regulation: CSNK1E ---> cell differentiation	Regulation		2
Regulation: ANG ---> cell differentiation	Regulation		2
Regulation: TLR1 ---> cell differentiation	Regulation		2
negative Regulation: MURC --- cell differentiation	Regulation	negative	2
positive Regulation: MAP1LC3B --+> cell differentiation	Regulation	positive	2
negative Regulation: ZFP36L2 --- cell differentiation	Regulation	negative	2
Regulation: SMG1 ---> cell differentiation	Regulation		2
Regulation: LANCL1 ---> cell differentiation	Regulation		2
positive Regulation: SLC31A1 --+> cell differentiation	Regulation	positive	2
Regulation: MACF1 ---> cell differentiation	Regulation		2
Regulation: JADE1 ---> cell differentiation	Regulation		2
Regulation: PLXDC2 ---> cell differentiation	Regulation		2
Cell adhesion			
positive Regulation: SPP1 --+> cell adhesion	Regulation	positive	184
positive Regulation: MAPK14 --+> cell adhesion	Regulation	positive	23

positive Regulation: MCAM --+> cell adhesion	Regulation	positive	17
positive Regulation: LAMA2 --+> cell adhesion	Regulation	positive	7
positive Regulation: TGFB2 --+> cell adhesion	Regulation	positive	6
Regulation: LAMP2 ---> cell adhesion	Regulation		5
Regulation: GNA12 ---> cell adhesion	Regulation		5
Regulation: ANG ---> cell adhesion	Regulation		4
Regulation: SPON1 ---> cell adhesion	Regulation		4
Regulation: CYTIP ---> cell adhesion	Regulation		3
negative Regulation: SAA1 --- cell adhesion	Regulation	negative	3
Regulation: DMD ---> cell adhesion	Regulation		3
Regulation: SEMA4D ---> cell adhesion	Regulation		3
Regulation: BAG1 ---> cell adhesion	Regulation		3
Regulation: CHRM3 ---> cell adhesion	Regulation		3
Regulation: LAMA5 ---> cell adhesion	Regulation		3
Regulation: EDIL3 ---> cell adhesion	Regulation		3
positive Regulation: CSNK1E --+> cell adhesion	Regulation	positive	2
Regulation: PTAFR ---> cell adhesion	Regulation		2
Regulation: PLXDC2 ---> cell adhesion	Regulation		2
Regulation: PHB ---> cell adhesion	Regulation		2

Cytoskeleton organization and biogenesis

positive Regulation: MAPK14 --+> cytoskeleton organization	Regulation	positive	48
positive Regulation: SPP1 --+> cytoskeleton organization and biogenesis	Regulation	positive	21
Regulation: F2R ---> cytoskeleton organization and biogenesis	Regulation		18
positive Regulation: MCAM --+> cytoskeleton organization and biogenesis	Regulation	positive	6
Regulation: CAPN6 ---> cytoskeleton organization and biogenesis	Regulation		5
Regulation: GNA12 ---> cytoskeleton organization and biogenesis	Regulation		4
Regulation: DMD ---> cytoskeleton organization and biogenesis	Regulation		3
Regulation: ANG ---> cytoskeleton organization and biogenesis	Regulation		2
Regulation: SMAD1 ---> cytoskeleton organization and biogenesis	Regulation		2
Regulation: PAK3 ---> cytoskeleton organization and biogenesis	Regulation		2
positive Regulation: RBFOX1 --+> cytoskeleton organization and biogenesis	Regulation	positive	2
Regulation: S1PR2 ---> cytoskeleton organization and biogenesis	Regulation		2
Regulation: PRKG1 ---> cytoskeleton organization and biogenesis	Regulation		2
Regulation: GNAI1 ---> cytoskeleton organization and biogenesis	Regulation		2

Regulation: LPAR2 ---> cytoskeleton organization and biog	Regulation		2
positive Regulation: SEMA4D --+> cytoskeleton organizatio	Regulation	positive	2
Regulation: TGFB2 ---> cytoskeleton organization and biog	Regulation		2
Regulation: MACF1 ---> cytoskeleton organization and biog	Regulation		2

Protein degradation

Regulation: TRIM63 ---> protein degradation	Regulation		56
positive Regulation: BAG1 --+> protein degradation	Regulation	positive	11
Regulation: CUL3 ---> protein degradation	Regulation		8
positive Regulation: MAPK14 --+> protein degradation	Regulation	positive	6
negative Regulation: PPARGC1B --- protein degradation	Regulation	negative	6
Regulation: LAMP2 ---> protein degradation	Regulation		5
Regulation: SPP1 ---> protein degradation	Regulation		4
negative Regulation: KPNA1 --- protein degradation	Regulation	negative	3
Regulation: ABCA1 ---> protein degradation	Regulation		3
Regulation: NOS2 ---> protein degradation	Regulation		2
positive Regulation: TGFB2 --+> protein degradation	Regulation	positive	2
Regulation: PMAIP1 ---> protein degradation	Regulation		2
Regulation: HNRNPD ---> protein degradation	Regulation		2

G1/S transition

positive Regulation: MAPK14 --+> G1/S transition	Regulation	positive	25
negative Regulation: PHB --- G1/S transition	Regulation	negative	8
negative Regulation: CCNG1 --- G1/S transition	Regulation	negative	6
negative Regulation: TGFB2 --- G1/S transition	Regulation	negative	5
Regulation: KMT2E ---> G1/S transition	Regulation		4
positive Regulation: GLI1 --+> G1/S transition	Regulation	positive	4
Regulation: ESRRA ---> G1/S transition	Regulation		3
negative Regulation: SMARCA2 --- G1/S transition	Regulation	negative	3
Regulation: GNL3 ---> G1/S transition	Regulation		3
Regulation: SPP1 ---> G1/S transition	Regulation		2

Lipid metabolism

Regulation: ABCA1 ---> lipid metabolism	Regulation		41
Regulation: ABHD5 ---> lipid metabolism	Regulation		14

positive Regulation: PPARGC1B --> lipid metabolism	Regulation	positive	14
Regulation: ESRRA ---> lipid metabolism	Regulation		7
negative Regulation: PHB --- lipid metabolism	Regulation	negative	6
Regulation: KLF11 ---> lipid metabolism	Regulation		5
Regulation: GPD1 ---> lipid metabolism	Regulation		5
Regulation: SAA1 ---> lipid metabolism	Regulation		5
Regulation: MAPK14 ---> lipid metabolism	Regulation		5
Regulation: GK ---> lipid metabolism	Regulation		3
negative Regulation: NOS2 --- lipid metabolism	Regulation	negative	3
Regulation: NPC1L1 ---> lipid metabolism	Regulation		2
Regulation: FADS1 ---> lipid metabolism	Regulation		2
Regulation: S1PR2 ---> lipid metabolism	Regulation		2
Regulation: SOD2 ---> lipid metabolism	Regulation		2
Regulation: PRKAA1 ---> lipid metabolism	Regulation		2
Regulation: KCNQ1 ---> lipid metabolism	Regulation		2
Regulation: TSPO ---> lipid metabolism	Regulation		2

Fatty acids oxidation

positive Regulation: ESRRA --> fatty acid oxidation	Regulation	positive	43
positive Regulation: PPARGC1B --> fatty acid oxidation	Regulation	positive	25
positive Regulation: MAPK14 --> fatty acid oxidation	Regulation	positive	10
positive Regulation: ABHD5 --> fatty acid oxidation	Regulation	positive	6
positive Regulation: KLF11 --> fatty acid oxidation	Regulation	positive	4
positive Regulation: PRKAA1 --> fatty acid oxidation	Regulation	positive	3
Regulation: ABCA1 ---> fatty acid oxidation	Regulation		3
Regulation: TRIM63 ---> fatty acid oxidation	Regulation		2
positive Regulation: SAA1 --> fatty acid oxidation	Regulation	positive	2
negative Regulation: PHB --- fatty acid oxidation	Regulation	negative	2
positive Regulation: NOS2 --> fatty acid oxidation	Regulation	positive	2

Glucose import

positive Regulation: MAPK14 --> glucose import	Regulation	positive	71
Regulation: PRKAA1 ---> glucose import	Regulation		14
Regulation: SLC2A5 ---> glucose import	Regulation		11
Regulation: NOS2 ---> glucose import	Regulation		10

positive Regulation: SOD2 --> glucose import	Regulation	positive	5
positive Regulation: SPP1 --> glucose import	Regulation	positive	4
negative Regulation: MLX --- glucose import	Regulation	negative	4
Regulation: PPARGC1B ---> glucose import	Regulation		4
negative Regulation: GRB10 --- glucose import	Regulation	negative	4
Regulation: MEF2A ---> glucose import	Regulation		3
Regulation: SLMAP ---> glucose import	Regulation		3
Regulation: ABCA1 ---> glucose import	Regulation		3
negative Regulation: ABHD5 --- glucose import	Regulation	negative	2
Regulation: GNAI1 ---> glucose import	Regulation		2
Regulation: SAA1 ---> glucose import	Regulation		2
positive Regulation: SLC2A9 --> glucose import	Regulation	positive	2
positive Regulation: ESRRA --> glucose import	Regulation	positive	2

Energy homeostasis

Regulation: ESRRA ---> energy homeostasis	Regulation		18
Regulation: PRKAA1 ---> energy homeostasis	Regulation		7
negative Regulation: NOS2 --- energy homeostasis	Regulation	negative	3
Regulation: ABHD5 ---> energy homeostasis	Regulation		3
Regulation: PRKAB2 ---> energy homeostasis	Regulation		2
Regulation: CPE ---> energy homeostasis	Regulation		2
Regulation: GRB10 ---> energy homeostasis	Regulation		2
Regulation: SOD2 ---> energy homeostasis	Regulation		2
Regulation: GK ---> energy homeostasis	Regulation		2
Regulation: PPARGC1B ---> energy homeostasis	Regulation		2

Gluconeogenesis

positive Regulation: MAPK14 --> gluconeogenesis	Regulation	positive	17
negative Regulation: NOS2 --- gluconeogenesis	Regulation	negative	5
Regulation: GK ---> gluconeogenesis	Regulation		3
positive Regulation: PPARGC1B --> gluconeogenesis	Regulation	positive	3
Regulation: SPP1 ---> gluconeogenesis	Regulation		3
Regulation: PRKAA1 ---> gluconeogenesis	Regulation		3
Regulation: ESRRA ---> gluconeogenesis	Regulation		3
Regulation: GPD1 ---> gluconeogenesis	Regulation		3

Regulation: ABCC8 ---> gluconeogenesis

Regulation

2