



**Inhibitors of Preadipocyte to Adipocyte Transition**

DLK1
GATA2
GATA3
GATA4
WNT1
WNT5B
WNT10B
NDN

**Transcription Factors/Modulators**

CEBPA
CEBPB
CEBPD
PPARA
PPARG
PPARD
RXRA
RXRG
RARA
NR1H3
CREB1

MEF2A
MEF2B
MEF2C
MEF2D
SREBF1
MBNL1
NCOA1
NR2F1
RORA
NRIP1
NCOR1
NCOR2

**Growth Factors/Hormones**

INS
IGF1
NR3C1
GH1
TGFB1
PRLR

**Fully Differentiated Adipocyte Markers**

GTF3A
FAS
SLC2A4
PLIN
LPL
PPARGC1A
UCP1
LIPE

**Miscellaneous**

BMP1
BMP2
BMP3
GDF10
BMP4

FOXO1
FOXC2

CNTFR
LIFR
IL6ST
OSM
CTNNB1
SMAD3
DVL1
HNF1A
FRZB
LOC486804
LOC483120

E2F1
E2F4
RBL1
RBL2
RB1

ASIP
DDIT3

GADD45A
GADD45B
HMG A1
ID3

STAT1
STAT2
STAT3
STAT5A
STAT5B
STAT6
HIF1A
CUGBP1

AHR
CISD1
WWTR1

LIF
MIF
MIXL1
CDKN1A
SERPINE1
PTGIS
SCD
SP1
TWIST1
SFRP4

**Insulin Action Genes**

IRS1
IRS2
IRS3L
IRS4

**Possible Lipodystrophy Genes**

BSCL2
LMNA
AGPAT2
ZMPSTE24
LPIN1
LPIN2
LPIN3

**Adipocyte Secretory Products**

LEP
ADIPOQ
IL6
TNF
RETN
CFD
ADFP
PNPLA3
AGT
NAMPT
SPOCK1