

**Supplementary Table 8. Network file for use with the R BoolNet library.**

It describes the optimized Boolean network used in this manuscript simulating the NGF-induced PC12 cell differentiation.

```
targets,factors
NGF,NGF
TRKA,NGF
RAS,TRKAIFAK
RAF,(PLCIJNKIRAS)
JNK,RAS
MEK,RAF
ERK,MEK
PI3K,NGF
AKT,PI3K
PLC,NGFINPY
NPY,AP1
JUNB,JNK
P53,ERKIJNK
AP1,JNK&ERK
KLF2,PI3K&JNK
KLF4,JNK&!CellCycleArrest
KLF5,P53&ERK
KLF6,JNK
KLF10,PI3K&JNK
MAFF,JNK
DUSP6,JNK
FOSL1,JNK
CITED2,ERK&JNK
BTG2,PI3K&JNK&!CellCycleArrest
ZFP36,JNK&ERK&!ZFP36_inh
ZFP36_inh,ZFP36[-2]|ZFP36_inh
MYC,JNK&ERK&AKT
UPAR,AP1
MMP10,UPAR
ITGA1,MMP10
FAK,ITGA1
CellDifferentiation,UPAR&maj(DUSP6,FOSL1,CITED2,KLF5,KLF6,ZFP36,MYC,JUNB,MAFF)
CellCycleArrest,CellCycleArrest!(KLF4&BTG2)
```