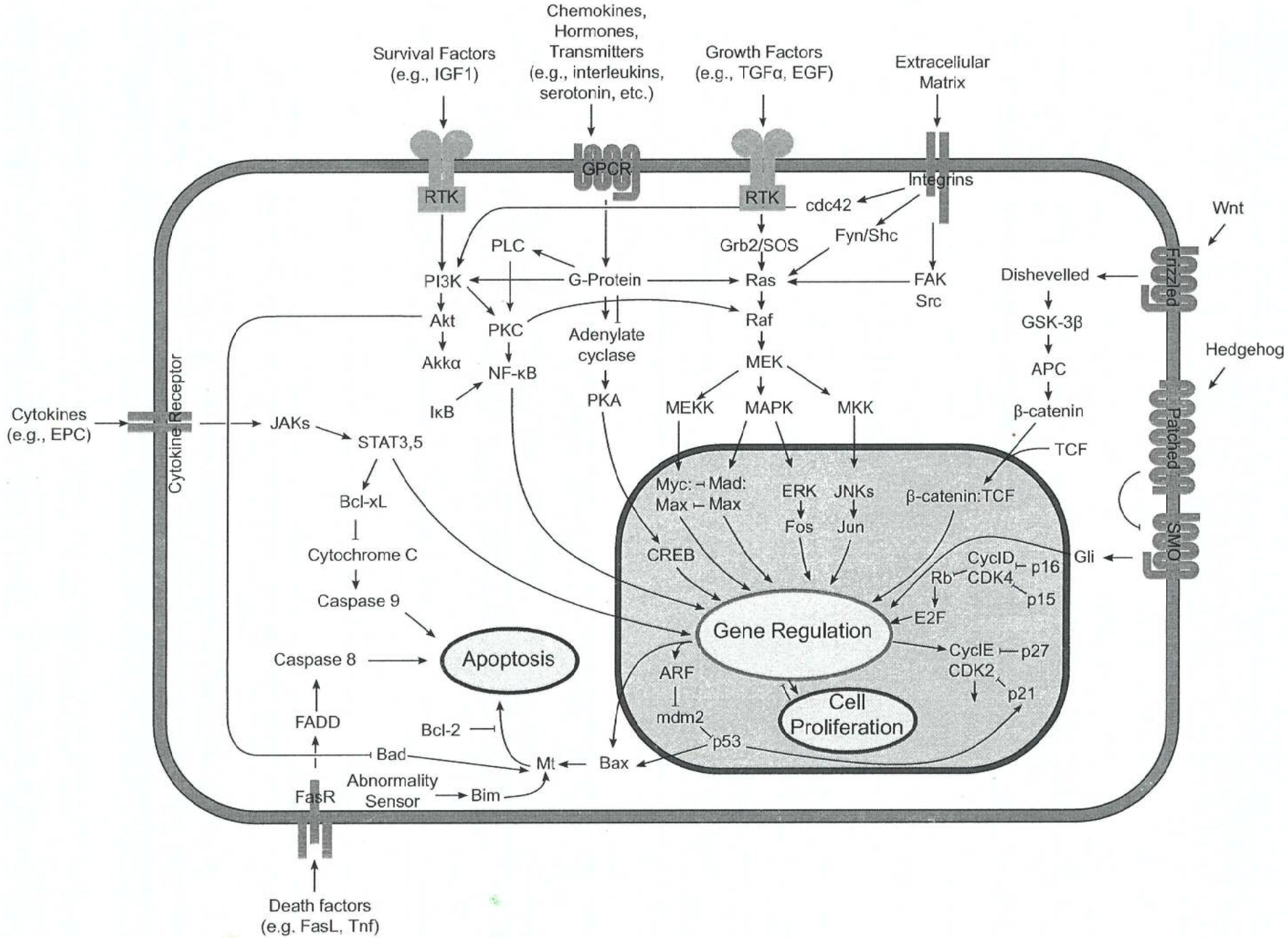
Survival Factors
(e.g., IGF1)
Chemokines,
Hormones,
Transmitters
(e.g., interleukins,
serotonin, etc.)
Growth Factors
(e.g., TGFα, EGF)
Extracellular
Matrix
RTK
GPCR
RTK
Integrins
cdc42
Fyn/Shc
Grb2/SOS
PLC
PI3K
G-Protein
Ras
FAK
Src
Akt
PKC
Adenylate
cyclase
Raf
Akkα
NF-κB
MEK
IκB
PKA
MEKK
MAPK
MKK
Cytokines
(e.g., EPC)
Cytokine Receptor
JAKs
STAT3,5
Bcl-xL
Cytochrome C
Caspase 9
Caspase 8
Apoptosis
FADD
Bcl-2
Bad
Mt
Bax
Abnormality
Sensor
Bim
FasR
Death factors
(e.g. FasL, Tnf)
Wnt
Frizzled
Dishevelled
GSK-3β
APC
β-catenin
Hedgehog
Patched
SMO
Gli
TCF
Myc:
Max
Mad:
Max
ERK
Fos
JNKs
Jun
β-catenin:TCF
CREB
CycID
CDK4
p16
p15
Rb
E2F
Gene Regulation
CycIE
CDK2
p27
p21
ARF
mdm2
p53
Cell
Proliferation