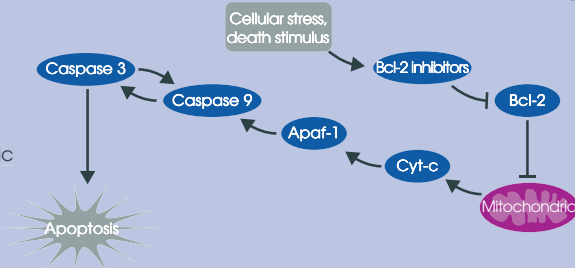


Apoptosis and cancer signaling pathways

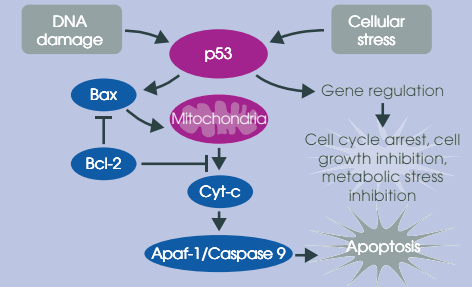
Bcl-2 signaling in cellular apoptosis

The bcl-2 family consist of pro- and anti-apoptotic proteins involved in intrinsic mitochondrial cell death. They regulate the release of apoptotic factors into the cytoplasm including cytochrome C and Apaf-1, by mediating outer membrane permeabilisation. This leads to activation of caspase-9 and the resulting caspase cascade.



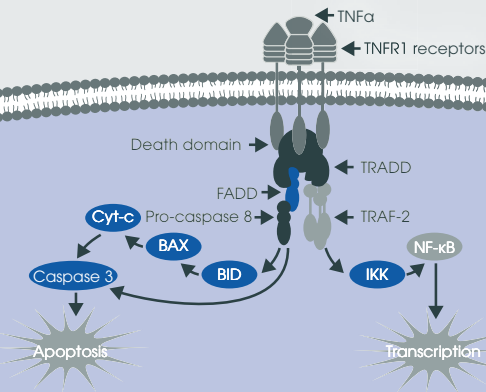
p53 signaling in apoptosis and gene transcription

p53 is a critical tumour suppressive transcription factor which responds to cellular stress by triggering cell cycle arrest and apoptosis through transcriptional regulation.



Death receptor signaling in apoptosis and gene transcription

Death receptors (DRs) belong to the tumour necrosis factor (TNF) family of cytokines which induce apoptosis. These receptors can activate caspases within seconds causing apoptosis.



Inhibitors of apoptosis signaling in cellular apoptosis

Inhibitors of apoptosis (IAPs) are a conserved group of proteins containing Baculovirus-IAP repeats involved in the regulation of apoptosis as well as a number of other cellular processes.

