

1. Apoptosis caused by incorrect interactions between cell and ECM

2. Low-grade chronic systemic inflammation established during physiological aging

3. Hemoprotein released from mitochondria during apoptosis (2 words)

4. The other name of adult progeria (2 words)

5. The process of binding of a protein, lipid or DNA with a sugar without the action of an enzyme

6. Special name of phagocytosis of apoptotic bodies

7. Result of gel electrophoresis of apoptotic DNA fragments (2 words)

8. Serine proteases present in granules of cytotoxic T cells

9. The assay, in the nicks in the DNA are identified by terminal deoxynucleotidyl transferase - TdT

10. The name of class III deacetylases

11. The name of cysteine proteases, main enzymes of apoptosis

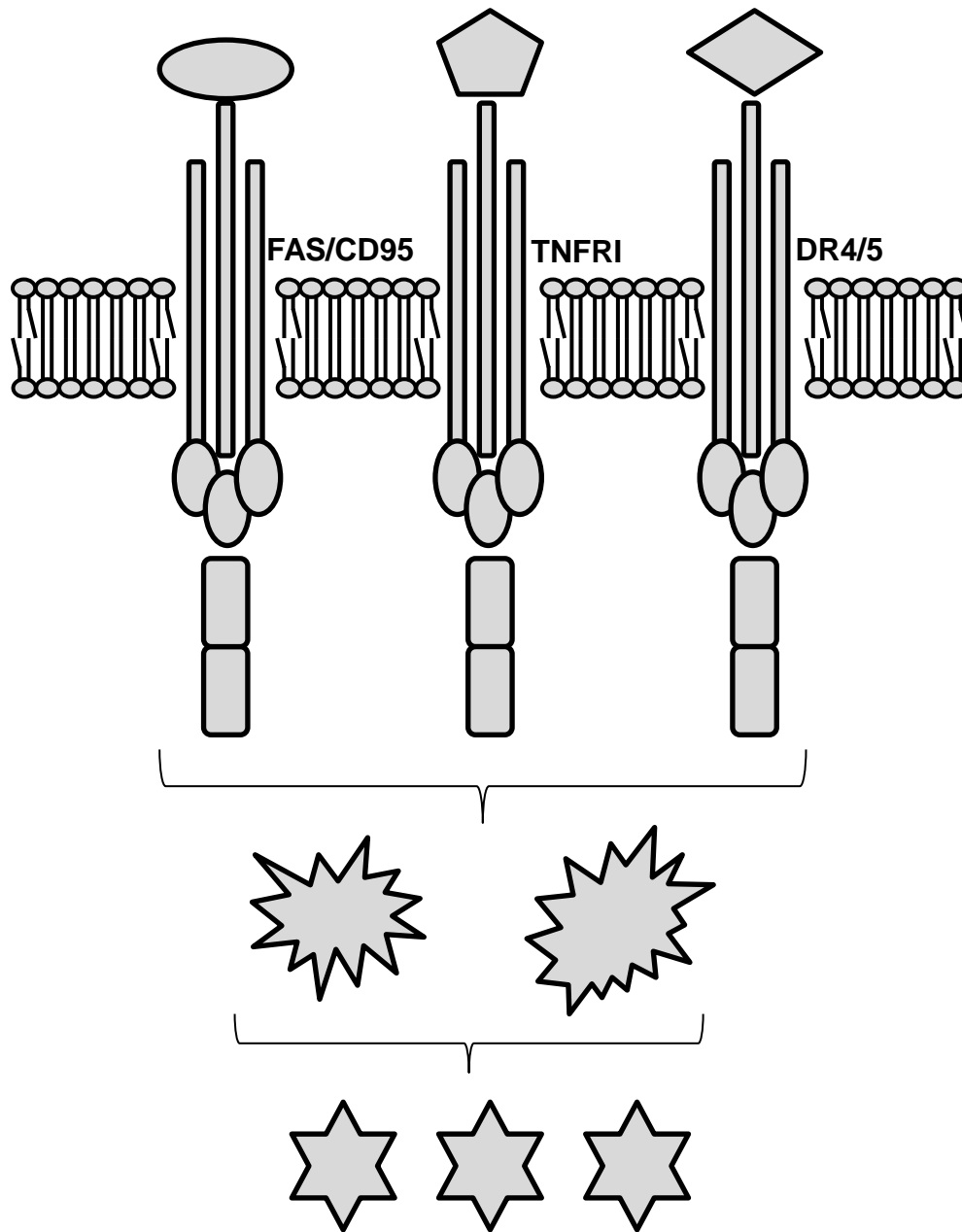
12. Type I of programmed cell death

13. The organelle, which release DIABLO

14. The pathway of apoptosis induced by death receptors (4 words)

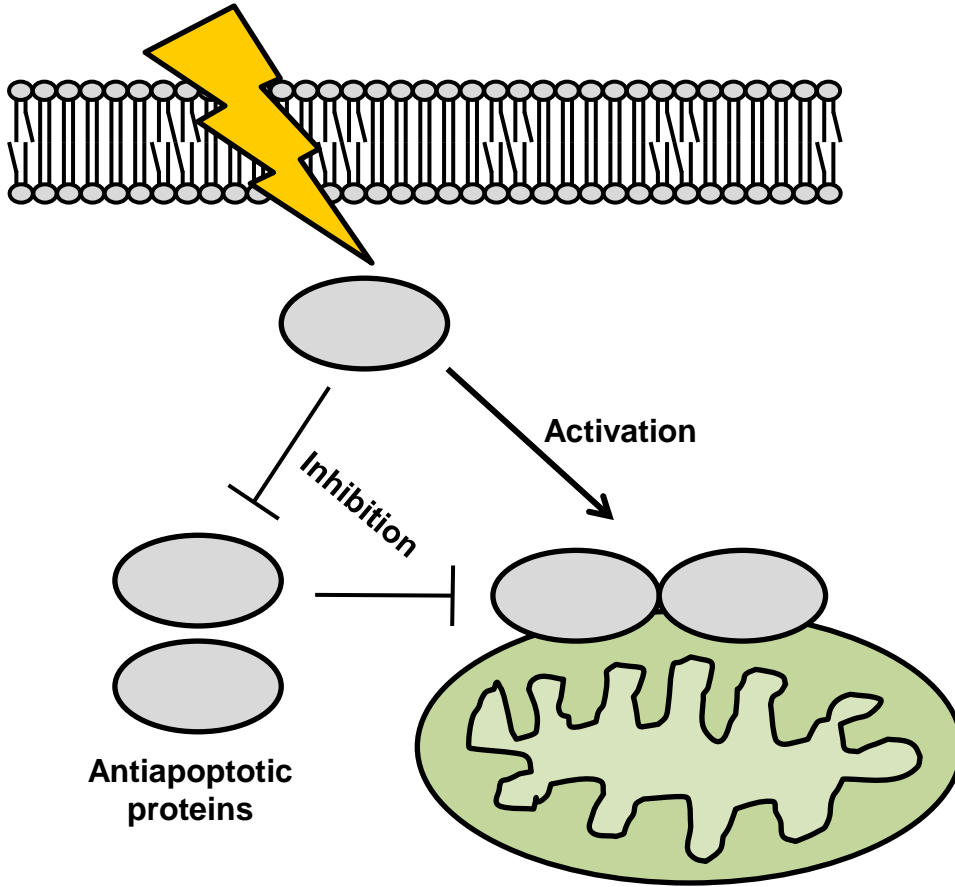
15. Fragments of a repetitive noncoding DNA sequence (TTAGGG) and associated proteins

16. Ligand for DR4 and DR5



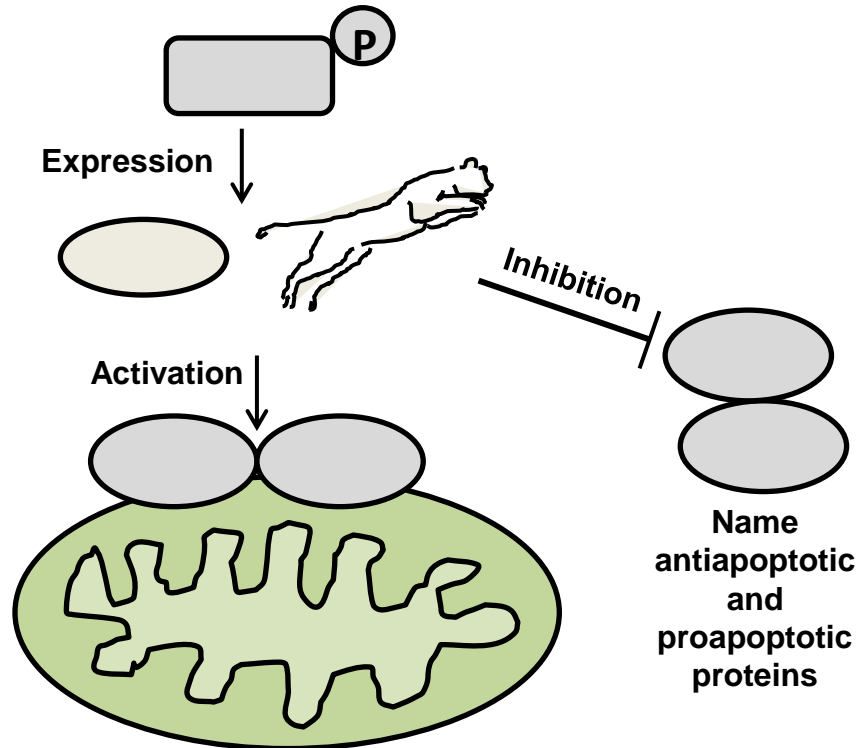
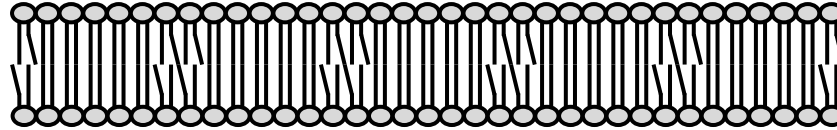
- CARD
- Caspase 3
- Caspase 6
- Caspase 7
- Caspase 8
- Caspase 10
- DD
- DED
- FADD
- FAS ligand
- TNF
- TRAIL
- TRADD

Incorrect interactions  
between cell and ECM



- BAK
- BAX
- BCL-2
- BIM
- BCL-xL

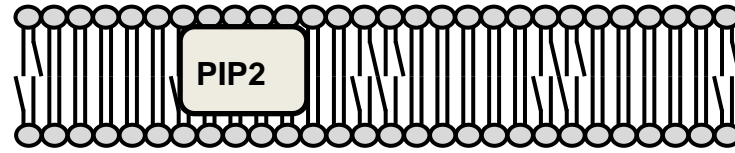
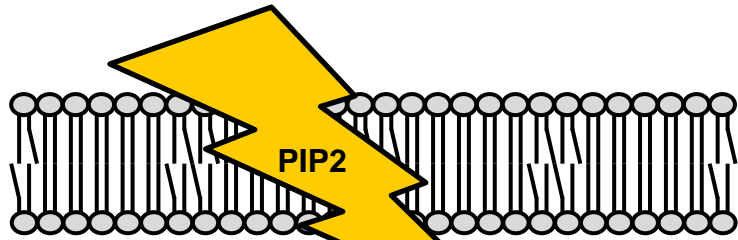
# DNA DAMAGE



- BAK
- BAX
- BCL-2
- BCL-xL
- Noxa
- p53
- PUMA

**SURVIVAL SIGNAL**

**LACK OF SURVIVAL SIGNAL**

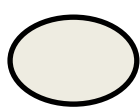


Phosphorylation

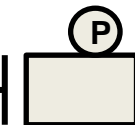


Activation

Kinase



Inactivation



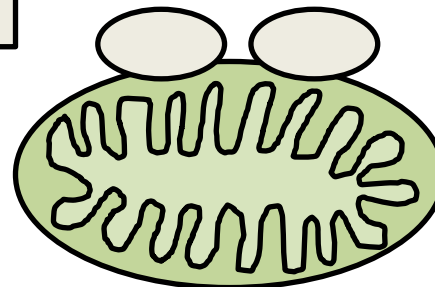
Kinase  is not activated

Protein  is not phosphorylated and is active.

Inhibition

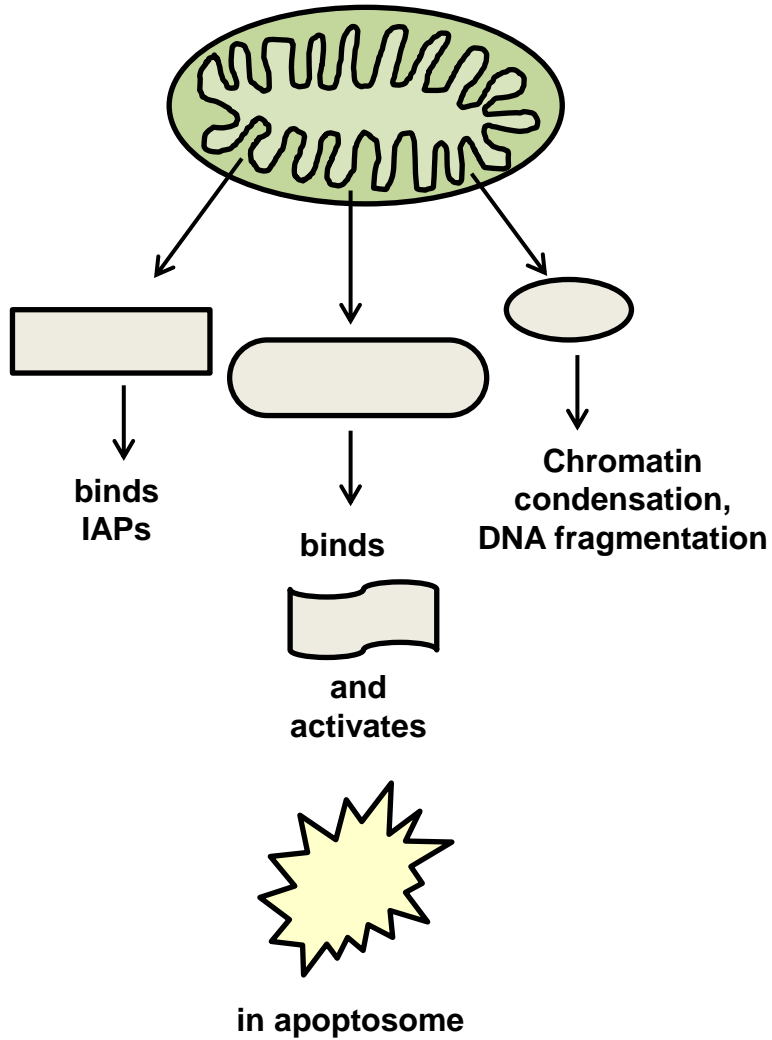


Activation



- AKT
- BAD
- BAK
- BAX
- BCL-2
- BCL-xL
- PI3K

# Cell death stimuli



AIF

APAF-1

Caspase 9

Cytochrome c

CARD

Diablo