
Summary

Production Name	Caspase-3 Rabbit Polyclonal Antibody
Description	Rabbit Polyclonal Antibody
Host	Rabbit
Application	WB,
Reactivity	Human,Mouse,Rat,Fish

Performance

Conjugation	Unconjugated
Modification	Unmodified
Isotype	IgG
Clonality	Polyclonal
Form	Liquid
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.
Buffer	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% New type preservative N.
Purification	Affinity purification

Immunogen

Gene Name	CASP3
Alternative Names	CASP3; CPP32; Caspase-3; CASP-3; Apopain; Cysteine protease CPP32; CPP-32; Protein Yama; SREBP cleavage activity 1; SCA-1
Gene ID	836.0
SwissProt ID	P42574.The antiserum was produced against synthesized peptide derived from human Caspase 3. AA range:116-165

Application

Dilution Ratio	WB 1:500 - 1:2000. ELISA: 1:20000.
Molecular Weight	35kD

Background

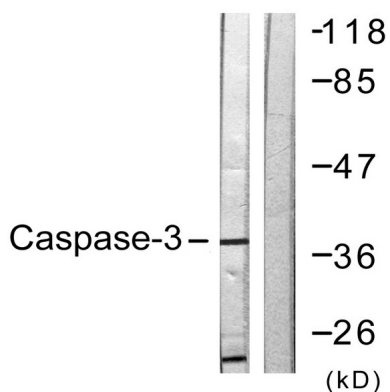
This gene encodes a protein which is a member of the cysteine-aspartic acid protease (caspase) family. Sequential activation of caspases plays a central role in the execution-phase of cell apoptosis. Caspases exist as inactive proenzymes which undergo proteolytic processing at conserved aspartic residues to produce two subunits, large and small, that dimerize to form the active enzyme. This protein cleaves and activates caspases 6, 7 and 9, and the protein itself is processed by caspases 8, 9 and 10. It is the predominant caspase involved in the cleavage of amyloid-beta 4A precursor protein, which is associated with neuronal death in Alzheimer's disease. Alternative splicing of this gene results in two transcript variants that encode the same protein. [provided by RefSeq, Jul 2008],catalytic activity:Strict requirement for an Asp residue at positions P1 and P4. It has a preferred cleavage sequence of Asp-Xaa-Xaa-Asp-|- with a hydrophobic amino-acid residue at P2 and a hydrophilic amino-acid residue at P3, although Val or Ala are also accepted at this position.,enzyme regulation:Inhibited by isatin sulfonamides.,function:Involved in the activation cascade of caspases responsible for apoptosis execution. At the onset of apoptosis it proteolytically cleaves poly(ADP-ribose) polymerase (PARP) at a '216-Asp-|-Gly-217' bond. Cleaves and activates sterol regulatory element binding proteins (SREBPs) between the basic helix-loop-helix leucine zipper domain and the membrane attachment domain. Cleaves and activates caspase-6, -7 and -9. Involved in the cleavage of huntingtin.,PTM: Cleavage by granzyme B, caspase-6, caspase-8 and caspase-10 generates the two active subunits. Additional processing of the propeptides is likely due to the autocatalytic activity of the activated protease. Active heterodimers between the small subunit of caspase-7 protease and the large subunit of caspase-3 also occur and vice versa.,PTM: S-nitrosylated on its catalytic site cysteine in unstimulated human cell lines and denitrosylated upon activation of the Fas apoptotic pathway, associated with an increase in intracellular caspase activity. Fas therefore activates caspase-3 not only by inducing the cleavage of the caspase zymogen to its active subunits, but also by stimulating the denitrosylation of its active site thiol.,similarity: Belongs to the peptidase C14A family.,subunit: Heterotetramer that consists of two anti-parallel arranged heterodimers, each one formed by a 17 kDa (p17) and a 12 kDa (p12) subunit.,tissue specificity: Highly expressed in lung, spleen, heart, liver and kidney. Moderate levels in brain and skeletal muscle, and low in testis. Also found in many cell lines, highest expression in cells of the immune system.,

Research Area

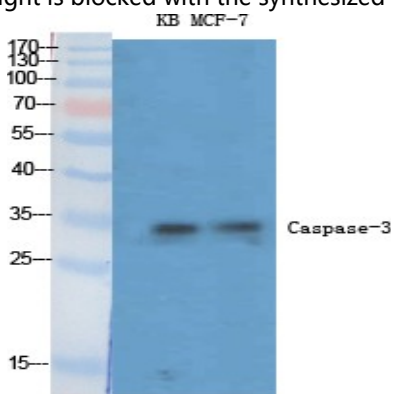
MAPK_ERK_Growth;MAPK_G_Protein;p53;Apoptosis_Inhibition;Apoptosis_Mitochondrial;Apoptosis_Overview;Natural killer cell mediated cytotoxicity;Alzheimer's disease;Parkinson's disease;Amyotrophic lateral sclerosis (ALS);Huntington's disease;Epithelial cell signaling in Helicobacter pylori infection;Pathways in cancer;Colorectal cancer;Viral myocarditis;

Image Data

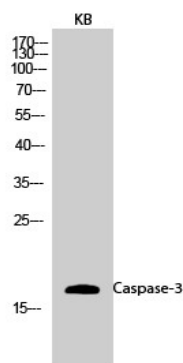
Product Name: Caspase-3 Rabbit Polyclonal Antibody
Catalog #: APRab07972



Western blot analysis of lysates from NIH/3T3 cells, treated with Etoposide 25uM 24h, using Caspase 3 Antibody. The lane on the right is blocked with the synthesized peptide.

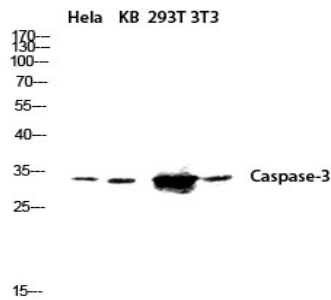


Western Blot analysis of various cells using Caspase-3 Polyclonal Antibody diluted at 1: 1000



Western Blot analysis of KB cells using Caspase-3 Polyclonal Antibody diluted at 1: 1000

Product Name: Caspase-3 Rabbit Polyclonal Antibody
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Western blot analysis of HeLa KB 293T 3T3 lysis using Caspase-3 antibody. Antibody was diluted at 1:1000

Note

For research use only.