

Caspase-3 Polyclonal Antibody

Catalog # AP63101

Product Information

Application WB Primary Accession P42574

Reactivity Human, Monkey

HostRabbitClonalityPolyclonalCalculated MW31608

Additional Information

Gene ID 836

Other Names CASP3; CPP32; Caspase-3; CASP-3; Apopain; Cysteine protease CPP32; CPP-32;

Protein Yama; SREBP cleavage activity 1; SCA-1

Dilution WB~~Western Blot: 1/500 - 1/2000. ELISA: 1/40000. Not yet tested in other

applications.

Format Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.09% (W/V) sodium

azide.

Storage Conditions -20°C

Protein Information

Name CASP3

Synonyms CPP32 {ECO:0000303 | PubMed:7983002}

Function Thiol protease that acts as a major effector caspase involved in the

execution phase of apoptosis (PubMed: 18723680, PubMed: 20566630,

PubMed: <u>23650375</u>, PubMed: <u>35338844</u>, PubMed: <u>35446120</u>,

PubMed: <u>7596430</u>). Following cleavage and activation by initiator caspases (CASP8, CASP9 and/or CASP10), mediates execution of apoptosis by catalyzing

cleavage of many proteins (PubMed:<u>18723680</u>, PubMed:<u>20566630</u>, PubMed:<u>23650375</u>, PubMed:<u>7596430</u>). At the onset of apoptosis, it proteolytically cleaves poly(ADP-ribose) polymerase PARP1 at a '216-Asp-|-Gly-217' bond (PubMed:<u>10497198</u>, PubMed:<u>16374543</u>,

PubMed:<u>77596430</u>, PubMed:<u>7774019</u>). Cleaves and activates sterol regulatory element binding proteins (SREBPs) between the basic helix-loop-helix leucine zipper domain and the membrane attachment domain (By similarity). Cleaves and activates caspase-6, -7 and -9 (CASP6, CASP7 and CASP9, respectively)

(PubMed:7596430). Cleaves and inactivates interleukin-18 (IL18)

(PubMed:37993714, PubMed:9334240). Involved in the cleavage of huntingtin

(PubMed:8696339). Triggers cell adhesion in sympathetic neurons through RET cleavage (PubMed:21357690). Cleaves and inhibits serine/threonine-protein kinase AKT1 in response to oxidative stress (PubMed:23152800). Acts as an inhibitor of type I interferon production during virus-induced apoptosis by mediating cleavage of antiviral proteins CGAS, IRF3 and MAVS, thereby preventing cytokine overproduction (PubMed:30878284). Also involved in pyroptosis by mediating cleavage and activation of gasdermin-E (GSDME) (PubMed:35338844, PubMed:35446120). Cleaves XRCC4 and phospholipid scramblase proteins XKR4, XKR8 and XKR9, leading to promote phosphatidylserine exposure on apoptotic cell surface (PubMed:23845944, PubMed:33725486). Cleaves BIRC6 following inhibition of BIRC6-caspase binding by DIABLO/SMAC (PubMed:36758104, PubMed:36758106).

Cellular Location

Cytoplasm.

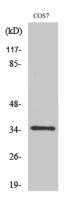
Tissue Location

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.

Background

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-loophelix leucine zipper domain and the membrane attachment domain. Cleaves and activates caspase-6, -7 and -9. Involved in the cleavage of huntingtin. Triggers cell adhesion in sympathetic neurons through RET cleavage.

Images



Western Blot analysis of various cells using Caspase-3 Polyclonal Antibody

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