

Caspase-3 Antibody
Rabbit Polyclonal Antibody
Catalog # ABV10109**Specification**

Caspase-3 Antibody - Product Information

Application	WB
Primary Accession	P42574
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	31608

Caspase-3 Antibody - Additional Information**Gene ID** 836**Application & Usage****Western blotting (0.5-4 µg/ml). However, the optimal conditions should be determined individually. The antibody detects proform and the cleaved large fragment of caspase-3.****Other Names**

CPP32 , CASP3, apopain, procaspase3, CPP32B, SCA-1, CPP-32, Apopain, Yama

Target/Specificity

Caspase-3

Antibody Form

Liquid

Appearance

Colorless liquid

Formulation

100 µg (0.2 mg/ml) affinity purified rabbit anti-caspase-3 polyclonal antibody in phosphate buffered saline (PBS), pH 7.2, containing 50% glycerol, 1% BSA, 0.02% thimerosal.

Handling

The antibody solution should be gently mixed before use.

Reconstitution & Storage

-20 °C

Background Descriptions**Precautions**

Caspase-3 Antibody is for research use only and not for use in diagnostic or therapeutic

procedures.

Caspase-3 Antibody - 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:23650375, PubMed:35338844, PubMed:35446120, PubMed:7596430). Following cleavage and activation by initiator caspases (CASP8, CASP9 and/or CASP10), mediates execution of apoptosis by catalyzing cleavage of many proteins (PubMed:18723680, PubMed:20566630, PubMed:23650375, PubMed:7596430). At the onset of apoptosis, it proteolytically cleaves poly(ADP-ribose) polymerase PARP1 at a '216-Asp-[Gly-217' bond (PubMed:10497198, PubMed:16374543, PubMed:7596430, PubMed:7774019). 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

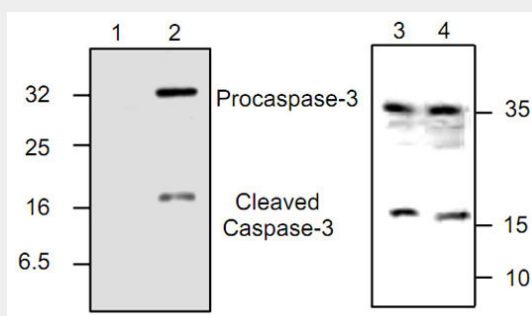
Highly expressed in lung, spleen, heart, liver and kidney. Moderate levels in brain and skeletal muscle, and low in testis. Also found in many cell lines, highest expression in cells of the immune system.

Caspase-3 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

Caspase-3 Antibody - Images



Caspase-3 Western blot analysis. Lane 1, rh-Caspase-3+ blocking peptide□Lane 2, rh-Caspase-3□Lane 3, Jurkat cell lysate□ Lane 4, Jurkat cell lysate

Caspase-3 Antibody - Background

Caspase family of cysteine proteases has been shown to play a key role in apoptosis. Caspase-3 is synthesized as an inactive pro-enzyme (32 kDa) that is processed in cells undergoing apoptosis by self-proteolysis and/or cleavage by another upstream protease. The processed form of caspase-3 consists of large (17 kD) and small (12 kD) subunits which associate to form an active enzyme. The active caspase-3 proteolytically cleaves and activates other caspases, as well as relevant targets in the cells (e.g., PARP and DFF).