

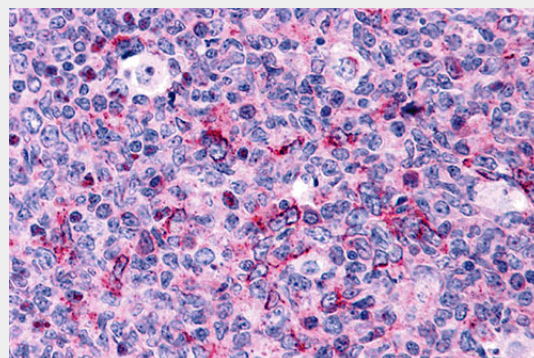
Caspase-3 Antibody

Catalog # ASC10291

Specification

Caspase-3 Antibody - Product Information

Application	IHC
Primary Accession	P42574
Other Accession	NP_004337 , 14790119
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	30 kDa KDa
Application Notes	Caspase-3 antibody can be used for detection of Caspase-3 by immunohistochemistry at 5 µg/mL.



Immunohistochemistry of Caspase-3 in human tonsil tissue with Caspase-3 antibody at 5 µg/mL.

Caspase-3 Antibody - Additional Information

Gene ID **836**
Other Names
Caspase-3 Antibody: CPP32, SCA-1, CPP32B, CPP32, Caspase-3, Apopain, CASP-3, caspase 3, apoptosis-related cysteine peptidase

Target/Specificity

CASP3; At least two isoforms of Caspase-3 are known to exist.

Reconstitution & Storage

Caspase-3 antibody can be stored at 4°C for three months and -20°C, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.

Precautions

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

Caspase-3 Antibody - Protein Information

Caspase-3 Antibody - Background

Caspase-3 Antibody: Caspases are a family of cysteine proteases that can be divided into the apoptotic and inflammatory caspase subfamilies. Unlike the apoptotic caspases, members of the inflammatory subfamily are generally not involved in cell death but are associated with the immune response to microbial pathogens. The apoptotic subfamily can be further divided into initiator caspases, which are activated in response to death signals, and executioner caspases, which are activated by the initiator caspases and are responsible for cleavage of cellular substrates that ultimately lead to cell death. Caspase-3 is synthesized as an inactive proenzyme that undergoes proteolytic cleavage by caspases 8, 9 and 10 to produce 2 subunits, termed p20 and p11. These subunits dimerize to form the active enzyme. Caspase-3 proteolytically cleaves and activates other proteins such as caspases 6, 7 and 9.

Caspase-3 Antibody - References

Martinon F and Tschopp J. Inflammatory caspases: linking an intracellular innate immune system to autoinflammatory diseases. Cell 2004; 117:561-74

Name CASP3**Synonyms** CPP32**Function**

Involved in the activation cascade of caspases responsible for apoptosis execution (PubMed:7596430). At the onset of apoptosis it proteolytically cleaves poly(ADP-ribose) polymerase (PARP) at a '216- Asp-|-Gly-217' bond (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. Cleaves and activates caspase-6, -7 and -9 (PubMed:7596430). 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).

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

Zhivotovsky B and Orrenius S. Caspase-2 function in response to DNA damage. Biochim. Biophys. Res. Comm. 2005; 331:859-67.
Wolf BB and Green DR. Suicidal tendencies: apoptotic cell death by caspase family proteinases. J. Biol. Chem. 1999; 274:20049-52.
Slee EA, Adrain C, and Martin SJ. Serial killers: ordering caspase activation events in apoptosis. Cell Death Diff. 1999; 6:1067-74.

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](#)