

Anti-active Caspase 3 Antibody
Mouse monoclonal antibody to active Caspase 3
Catalog # AP61575

Specification

Anti-active Caspase 3 Antibody - Product Information

Application	WB, IF
Primary Accession	P42574
Reactivity	Human, Mouse, Rat
Host	Mouse
Clonality	Monoclonal
Calculated MW	31608

Anti-active Caspase 3 Antibody - Additional Information

Gene ID 836

Other Names

CPP32; Caspase-3; CASP-3; Apopain; Cysteine protease CPP32; CPP-32; Protein Yama; SREBP cleavage activity 1; SCA-1

Target/Specificity

Recognizes endogenous levels of active Caspase 3 protein.

Dilution

WB~~WB (1/500 - 1/1000), IH (1/100 - 1/200), IF/IC (1/50 - 1/200)
IF~~WB (1/500 - 1/1000), IH (1/100 - 1/200), IF/IC (1/50 - 1/200)

Format

Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.09% (W/V) sodium azide.

Storage

Store at -20 °C. Stable for 12 months from date of receipt

Anti-active 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](http://www.uniprot.org/citations/18723680), PubMed: [20566630](http://www.uniprot.org/citations/20566630), PubMed: [23650375](http://www.uniprot.org/citations/23650375), PubMed: [35338844](http://www.uniprot.org/citations/35338844), PubMed: [35446120](http://www.uniprot.org/citations/35446120)),

PubMed: [7596430](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/18723680), PubMed: [20566630](http://www.uniprot.org/citations/20566630), PubMed: [23650375](http://www.uniprot.org/citations/23650375), PubMed: [7596430](http://www.uniprot.org/citations/7596430)). At the onset of apoptosis, it proteolytically cleaves poly(ADP-ribose) polymerase PARP1 at a '216-Asp-I-Gly-217' bond (PubMed: [10497198](http://www.uniprot.org/citations/10497198), PubMed: [16374543](http://www.uniprot.org/citations/16374543), PubMed: [7596430](http://www.uniprot.org/citations/7596430), PubMed: [7774019](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/7596430)). Cleaves and inactivates interleukin-18 (IL18) (PubMed: [37993714](http://www.uniprot.org/citations/37993714), PubMed: [9334240](http://www.uniprot.org/citations/9334240)). Involved in the cleavage of huntingtin (PubMed: [8696339](http://www.uniprot.org/citations/8696339)). Triggers cell adhesion in sympathetic neurons through RET cleavage (PubMed: [21357690](http://www.uniprot.org/citations/21357690)). Cleaves and inhibits serine/threonine-protein kinase AKT1 in response to oxidative stress (PubMed: [23152800](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/30878284)). Also involved in pyroptosis by mediating cleavage and activation of gasdermin-E (GSDME) (PubMed: [35338844](http://www.uniprot.org/citations/35338844), PubMed: [35446120](http://www.uniprot.org/citations/35446120)). Cleaves XRCC4 and phospholipid scramblase proteins XKR4, XKR8 and XKR9, leading to promote phosphatidylserine exposure on apoptotic cell surface (PubMed: [23845944](http://www.uniprot.org/citations/23845944), PubMed: [33725486](http://www.uniprot.org/citations/33725486)). Cleaves BIRC6 following inhibition of BIRC6-caspase binding by DIABLO/SMAC (PubMed: [36758104](http://www.uniprot.org/citations/36758104), PubMed: [36758106](http://www.uniprot.org/citations/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.

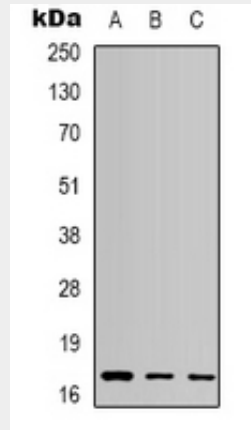
Anti-active Caspase 3 Antibody - Protocols

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

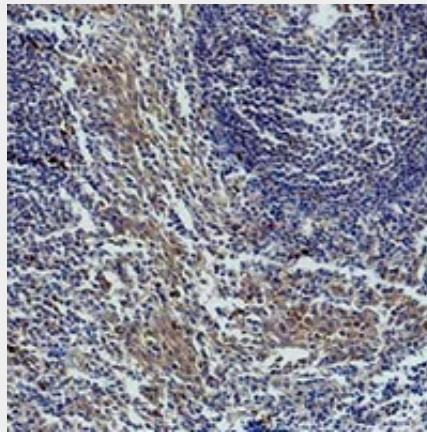
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)

- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

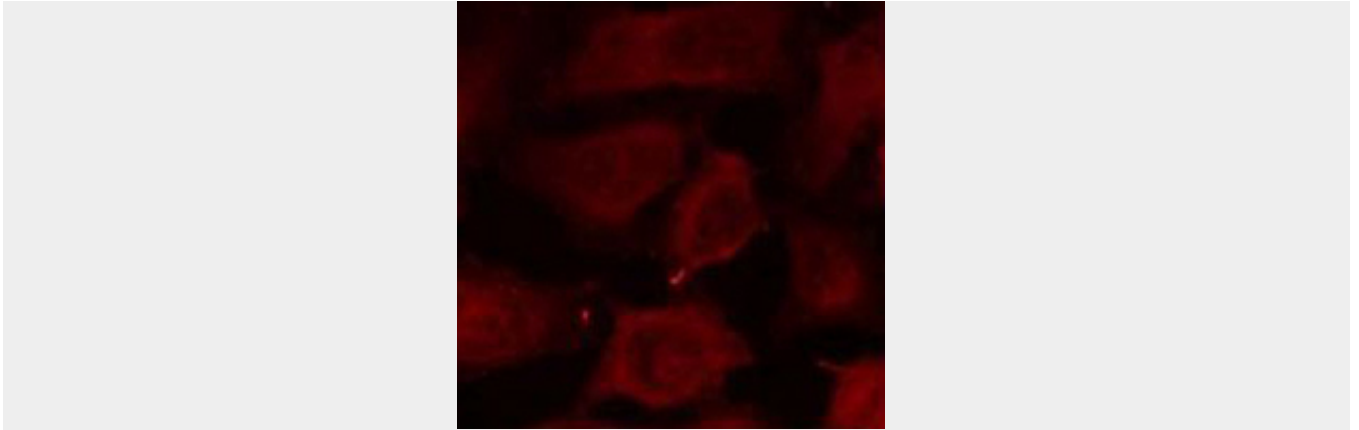
Anti-active Caspase 3 Antibody - Images



Western blot analysis of active Caspase 3 expression in HeLa (A), NIH3T3 (B), rat brain (C) whole cell lysates.



Immunohistochemical analysis of active Caspase 3 staining in human tonsil formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.



Immunofluorescent analysis of active Caspase 3 staining in HeLa cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C in a humidified chamber. Cells were washed with PBST and incubated with a DyLight 594-conjugated secondary antibody (red) in PBS at room temperature in the dark. DAPI was used to stain the cell nuclei (blue).

Anti-active Caspase 3 Antibody - Background

Recombinant protein corresponding to human active Caspase 3.