

Active Caspase-3 Monoclonal Antibody(5E1)
Catalog # AP63571**Specification****Active Caspase-3 Monoclonal Antibody(5E1) - Product Information**

Application	IF
Primary Accession	P42574
Reactivity	Human, Mouse, Rat, Chicken
Host	Mouse
Clonality	Monoclonal

Active Caspase-3 Monoclonal Antibody(5E1) - 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

IF~~IF: 1:50-200 WB: 1:500-1000 IHC: 1:100-200

Format

PBS, pH 7.4, containing 0.09% (W/V) sodium azide as Preservative and 50% Glycerol.

Storage Conditions

-20°C

Active Caspase-3 Monoclonal Antibody(5E1) - 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-|-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.

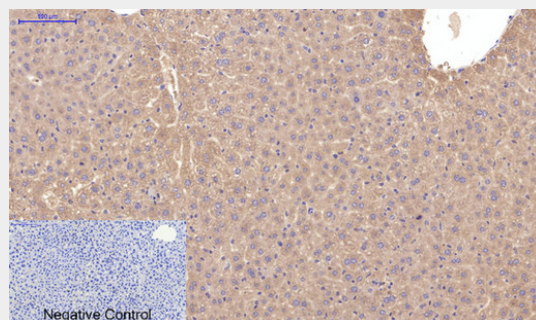
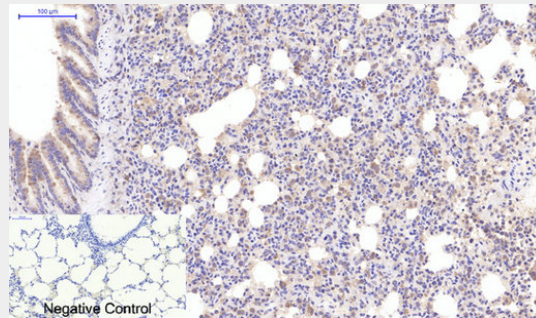
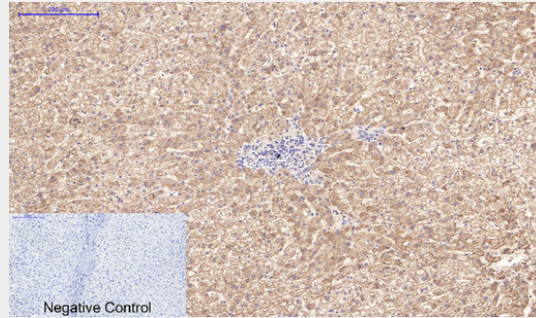
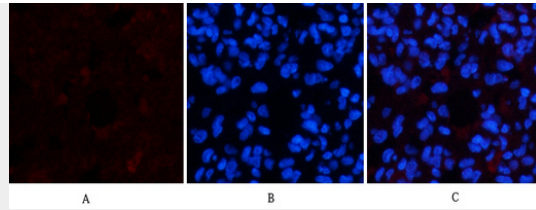
Active Caspase-3 Monoclonal Antibody(5E1) - Protocols

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](#)

Active Caspase-3 Monoclonal Antibody(5E1) - Images







Active Caspase-3 Monoclonal Antibody(5E1) - 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-loop- helix 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.