10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Anti-Caspase-3 (P10) Antibody

Catalog # ABO10627

Specification

Anti-Caspase-3 (P10) Antibody - Product Information

Application	**IHC, WB**
Primary Accession	P42574
Host	**Rabbit**
Reactivity	**Human**
Clonality	**Polyclonal**
Format	**Lyophilized**

Description
Rabbit IgG polyclonal antibody for Caspase-3(CASP3) detection. Tested with WB, IHC-P, ICC in Human.

Reconstitution
Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Anti-Caspase-3 (P10) Antibody - Additional Information

Gene ID 836

Other Names
Caspase-3, CASP-3, 3.4.22.56, Apopain, Cysteine protease CPP32, CPP-32, Protein Yama, SREBP cleavage activity 1, SCA-1, Caspase-3 subunit p17, Caspase-3 subunit p12, CASP3, CPP32

Calculated MW
31608 MW KDa

Application Details
Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml, Human, By Heat

Immunocytochemistry , 0.5-1 µg/ml, Human, -
Western blot, 0.1-0.5 µg/ml, Human

Subcellular Localization
Cytoplasm.

Tissue Specificity
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.

Protein Name
Caspase-3(CASP-3)

Contents
Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg Thimerosal, 0.05mg NaN3.

Immunogen
A synthetic peptide corresponding to a sequence at the C-terminus of human

Caspase-3(P10)(220-236aa CAMLKQYADKLEFMHIL).

Purification
Immunogen affinity purified.

Cross Reactivity
No cross reactivity with other proteins

Storage

At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated freezing and thawing.

Sequence Similarities
Belongs to the peptidase C14A family.

Anti-Caspase-3 (P10) 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.

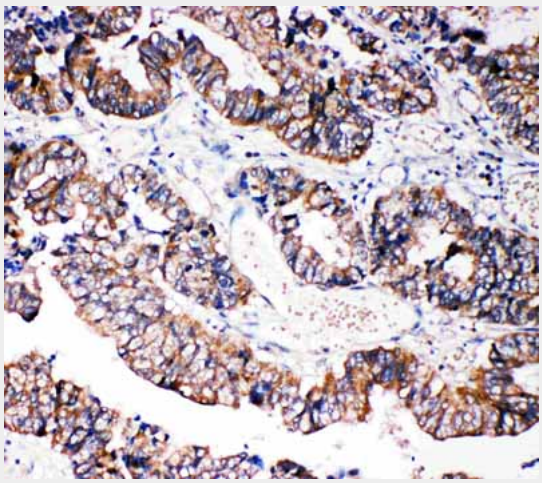
Tissue Location
Highly expressed in lung, spleen, heart, liver and kidney. Moderate levels in brain and skeletal muscle, and low in testis. Also found in many cell lines, highest expression in cells of the immune system.

Anti-Caspase-3 (P10) 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 Cytomety
- Cell Culture

Anti-Caspase-3 (P10) Antibody - Images



Anti-Caspase-3(P10), ABO10627, IHC(P)IHC(P): Human Intestinal Cancer Tissue

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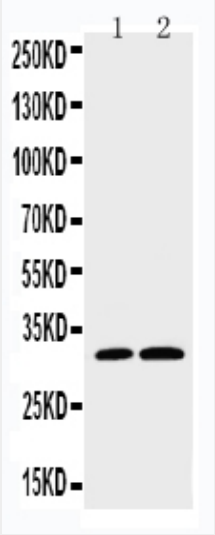
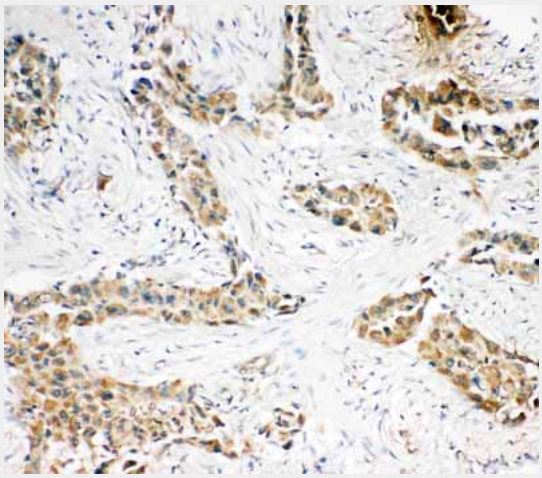


Anti-Caspase-3(P10), ABO10627, Western blottingLane 1: HELA Cell LysateLane 2: SMMC Cell Lysate



Anti-Caspase-3(P10), ABO10627, IHC(P)IHC(P): Human Lung Cancer Tissue

Anti-Caspase-3 (P10) Antibody - Background

Caspase 3 is a caspase protein which interacts with Survivin, XIAP, CFLAR, Caspase 8, HCLS1, Deleted in Colorectal Cancer, TRAF3 and GroEL. This gene which is located at 4q35 encodes a protein that is a member of the cysteine-aspartic acid protease(caspase) family. Sequential activation of caspases plays a central role in the execution-phase of cell apoptosis. Caspases exist as inactive proenzymes that undergo proteolytic processing at conserved aspartic residues to produce two subunits, large and small, that dimerize to form the active enzyme. This protein cleaves and activates caspases 6, 7, and 9; and the protein itself is processed by caspases 8, 9, and 10. It is the predominant caspase involved in the cleavage of amyloid-beta 4A precursor protein, which is associated with neuronal death in Alzheimer's disease. And the caspase-3 activation in heart failure sequentially cleaves SRF and generates a truncated SRF that appears to function as a dominant-negative transcription factor. Additionally, the caspase-3 influence on bone mineral density should be considered in any in vivo application of caspase-3 inhibitors to the treatment of human disease. In erythroid precursors undergoing terminal differentiation, Hsp70 prevents active CASP3 from cleaving GATA1 and inducing apoptosis.