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Cleaved-CASP3 (Asp175) Antibody
Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP3725a

Specification

Cleaved-CASP3 (Asp175) Antibody - Product Information

Application	**IHC-P, DB,E**
Primary Accession	P42574
Other Accession	P55213, Q95ND5, P70677, Q08DY9
Reactivity	**Human**
Predicted	**Bovine, Mouse, Pig, Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Antigen Region	**149-175**

Cleaved-CASP3 (Asp175) Antibody - Additional Information

Gene ID 836

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

Target/Specificity
This Cleaved antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 149-175 amino acids from human Cleaved.

Dilution
IHC-P~~1:50~100
DB~~1:500

Format
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

Storage
Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
Cleaved-CASP3 (Asp175) Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Cleaved-CASP3 (Asp175) 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:7596430, PubMed:18723680, PubMed:20566630, PubMed:23650375, PubMed:35338844, PubMed:35446120). Following cleavage and activation by initiator caspases (CASP8, CASP9 and/or CASP10), mediates execution of apoptosis by catalyzing cleavage of many proteins (PubMed:7596430, PubMed:18723680, PubMed:20566630, PubMed:23650375). At the onset of apoptosis, it proteolytically cleaves poly(ADP-ribose) polymerase PARP1 at a '216-Asp-|-Gly-217' bond (PubMed:7774019, PubMed:7596430, PubMed:10497198, PubMed:16374543). 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 (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). 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:35446120, PubMed:35338844). Cleaves XRCC4 and phospholipid scramblase proteins XKR4, XKR8 and XKR9, leading to promote phosphatidylserine exposure on apoptotic cell surface (PubMed:23845944, PubMed:33725486).

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.

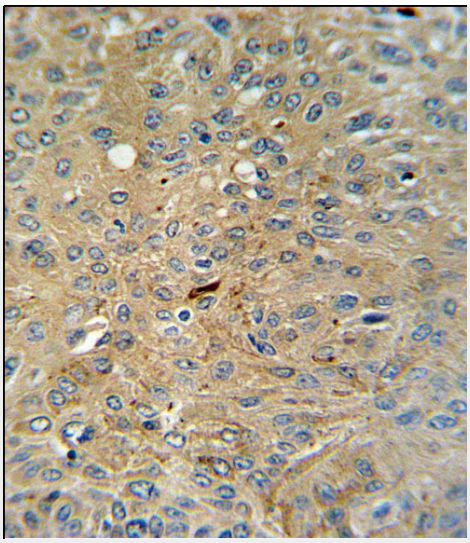
Cleaved-CASP3 (Asp175) Antibody - Protocols

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

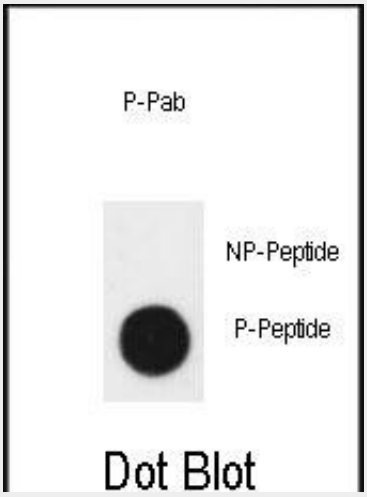
- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Cleaved-CASP3 (Asp175) Antibody - Images

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Cleaved-CASP3 (Asp175)Antibody (Cat. #AP3725a) IHC analysis in formalin fixed and paraffin embedded human lung carcinoma followed by peroxidase conjugation of the secondary antibody and DAB staining. This data demonstrates the use of the Cleaved-CASP3 (Asp175)Antibody for immunohistochemistry. Clinical relevance has not been evaluated.



Dot blot analysis of anti-Cleaved-CASP3 (Asp175) Antibody (Cat. #AP3725a) on nitrocellulose membrane. 50ng of Cleaved-peptide or Non Cleaved-peptide per dot were adsorbed. Antibody working concentrations are 0.5ug per ml.

Cleaved-CASP3 (Asp175) Antibody - Background

CASP3 encodes a protein which 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 which 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.

Cleaved-CASP3 (Asp175) Antibody - References

Mei, Y., et al. Mol. Cell 37(5):668-678(2010) Sohn, E.J., et al. Cancer Res. 70(3):1154-1163(2010) Karamitopoulou, E., et al. Pathology 42(1):37-42(2010)

Cleaved-CASP3 (Asp175) Antibody - Citations

- LncRNA HRCEG, regulated by HDAC1, inhibits cells proliferation and epithelial-mesenchymal-transition in gastric cancer
- Conjunctival Melanoma Targeted Therapy: MAPK and PI3K/mTOR Pathways Inhibition.
- FKBP11 protects intestinal epithelial cells against inflammation-induced apoptosis via the JNK-caspase pathway in Crohn's disease.
- Differential Neurotoxicity Related to Tetracycline Transactivator and TDP-43 Expression in Conditional TDP-43 Mouse Model of Frontotemporal Lobar Degeneration.
- PSMD7 downregulation induces apoptosis and suppresses tumorigenesis of esophageal squamous cell carcinoma the mTOR/p70S6K pathway.
- The long noncoding RNA ASNR regulates degradation of Bcl-2 mRNA through its interaction with AUF1.
- The Functional Characterization of Long Non-coding RNA Lnc_bc060912 in Human Lung Carcinoma Cells.