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Phospho-CASP3(S12) Antibody Blocking peptide
Synthetic peptide
Catalog # BP3778a

Specification

Phospho-CASP3(S12) Antibody Blocking peptide - Product Information

Primary Accession P42574

Phospho-CASP3(S12) Antibody Blocking peptide - 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

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

Phospho-CASP3(S12) Antibody Blocking peptide - 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:<a href="http://www.uniprot.org/citations/7774019"

target="_blank">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.

Phospho-CASP3(S12) Antibody Blocking peptide - Protocols

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

- Blocking Peptides

Phospho-CASP3(S12) Antibody Blocking peptide - Images

Phospho-CASP3(S12) Antibody Blocking peptide - Background

This gene encodes a protein which is a member of thecysteine-aspartic acid protease (caspase) family. Sequentialactivation of caspases plays a central role in the execution-phaseof cell apoptosis. Caspases exist as inactive proenzymes whichundergo proteolytic processing at conserved aspartic residues toproduce two subunits, large and small, that dimerize to form theactive enzyme. This protein cleaves and activates caspases 6, 7 and9, and the protein itself is processed by caspases 8, 9 and 10. Itis the predominant caspase involved in the cleavage of amyloid-beta4A precursor protein, which is associated with neuronal death inAlzheimer's disease. Alternative splicing of this gene results intwo transcript variants that encode the same protein. [provided byRefSeq].

Phospho-CASP3(S12) Antibody Blocking peptide - References

Wurstle, M.L., et al. J. Biol. Chem. 285(43):33209-33218(2010)Srikanth, C.V., et al. Science 330(6002):390-393(2010)Burke, S.P., et al. J. Biol. Chem. 285(39):30061-30068(2010)Chen, W., et al. Xi Bao Yu Fen Zi Mian Yi Xue Za Zhi 26(7):673-674(2010)Bellini, M.F., et al. Anticancer Res.

30(7):2845-2849(2010)