

Phospho-mouse CASP3(S12) Antibody

Affinity Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AP3778b

Product Information

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| Application | DB, E |
| Primary Accession | P70677 |
| Other Accession | NP_033940.1 |
| Reactivity | Mouse |
| Host | Rabbit |
| Clonality | Polyclonal |
| Isotype | Rabbit IgG |
| Clone Names | RB39711 |
| Calculated MW | 31475 |

Additional Information

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| Gene ID | 12367 |
| Other Names | Caspase-3, CASP-3, Apopain, Cysteine protease CPP32, CPP-32, LICE, Protein Yama, SREBP cleavage activity 1, SCA-1, Caspase-3 subunit p17, Caspase-3 subunit p12, Casp3, Cpp32 |
| Target/Specificity | This mouse CASP3 Antibody is generated from rabbits immunized with a KLH conjugated synthetic phosphopeptide corresponding to amino acid residues surrounding S12 of mouse CASP3. |
| Dilution | DB~~1:500 E~~Use at an assay dependent concentration. |
| 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 | Phospho-mouse CASP3(S12) Antibody is for research use only and not for use in diagnostic or therapeutic procedures. |

Protein Information

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| Name | Casp3 |
| Synonyms | Cpp32 {ECO:0000303 PubMed:8934524} |
| Function | Thiol protease that acts as a major effector caspase involved in the |

execution phase of apoptosis (PubMed:[16469926](#), PubMed:[8934524](#)). Following cleavage and activation by initiator caspases (CASP8, CASP9 and/or CASP10), mediates execution of apoptosis by catalyzing cleavage of many proteins (PubMed:[16469926](#), PubMed:[8934524](#)). At the onset of apoptosis, it proteolytically cleaves poly(ADP-ribose) polymerase PARP1 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 (CASP6, CASP7 and CASP9, respectively). Cleaves and inactivates interleukin-18 (IL18) (By similarity). Triggers cell adhesion in sympathetic neurons through RET cleavage (By similarity). Cleaves IL-1 beta between an Asp and an Ala, releasing the mature cytokine which is involved in a variety of inflammatory processes (By similarity). Cleaves and inhibits serine/threonine- protein kinase AKT1 in response to oxidative stress (PubMed:[12124386](#)). 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) (By similarity). Cleaves XRCC4 and phospholipid scramblase proteins XKR4, XKR8 and XKR9, leading to promote phosphatidylserine exposure on apoptotic cell surface (PubMed:[25231987](#), PubMed:[33725486](#)). Cleaves BIRC6 following inhibition of BIRC6-caspase binding by DIABLO/SMAC (By similarity).

Cellular Location

Cytoplasm {ECO:0000250|UniProtKB:P42574}.

Tissue Location

Highest expression in spleen, lung, liver, kidney and heart (PubMed:9038361). Lower expression in brain, skeletal muscle and testis (PubMed:9038361).

Background

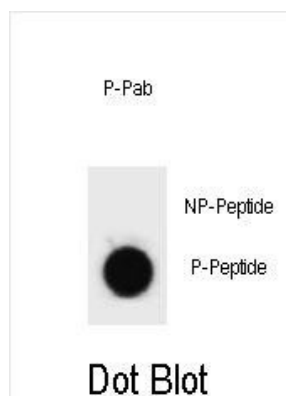
This gene encodes a protein which is a member of the cysteine-aspartic acid protease (caspase) family. Sequential activation of caspases plays a central role in the execution-phase of cell apoptosis. Caspases exist as inactive proenzymes which undergo proteolytic processing at conserved aspartic residues 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. Alternative splicing of this gene results in two transcript variants that encode the same protein. [provided by RefSeq].

References

- Srikanth, C.V., et al. Science 330(6002):390-393(2010)
 Li, F., et al. Cell Stem Cell 7(4):508-520(2010)
 Wang, L., et al. J. Neurosci. 30(39):13201-13210(2010)
 Gascon, E., et al. J. Neurosci. 30(37):12414-12423(2010)
 Bohsali, A., et al. BMC Microbiol. 10, 237 (2010) :

Images

Dot blot analysis of Phospho-mouse CASP3-S12 Antibody Phospho-specific Pab (Cat. #AP3778b) on nitrocellulose membrane. 50ng of Phospho-peptide or Non Phospho-peptide per dot were adsorbed. Antibody working concentrations are 0.6ug per ml.



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