

**Phospho-mouse CASP3(S12) Antibody**  
**Affinity Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP3778b**

## Specification

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### Phospho-mouse CASP3(S12) Antibody - Product Information

Application	DB,E
Primary Accession	<a href="#">P70677</a>
Other Accession	<a href="#">NP_033940.1</a>
Reactivity	Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	31475

### Phospho-mouse CASP3(S12) Antibody - Additional Information

**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

#### 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.

### Phospho-mouse CASP3(S12) Antibody - Protein Information

**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](#)).

#### **Cellular Location**

Cytoplasm {ECO:0000250|UniProtKB:P42574}.

#### **Tissue Location**

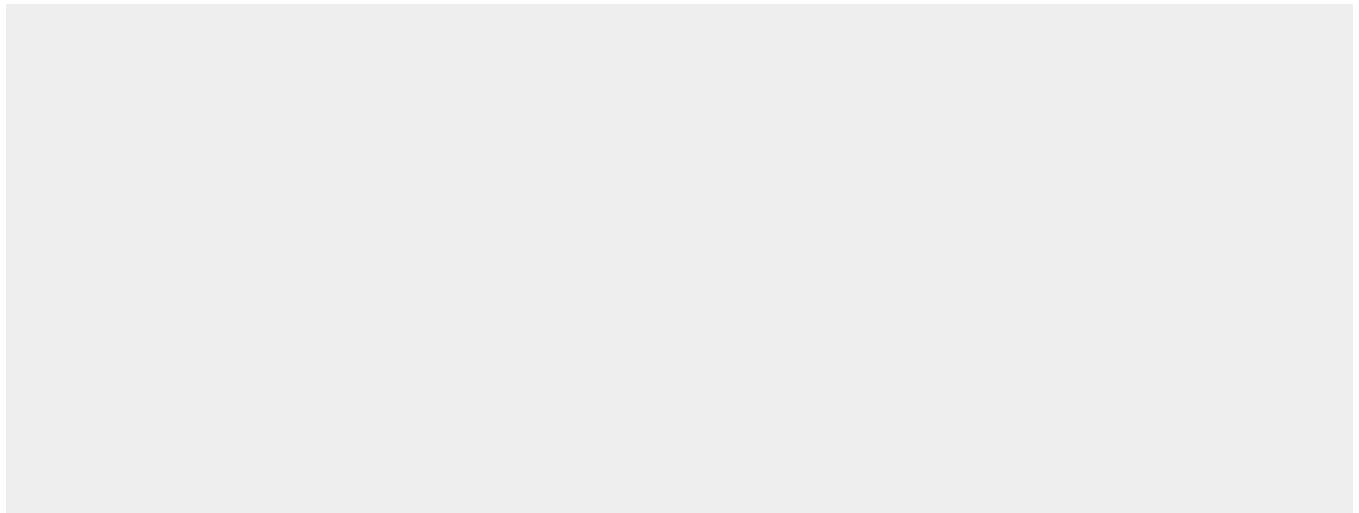
Highest expression in spleen, lung, liver, kidney and heart (PubMed:9038361). Lower expression in brain, skeletal muscle and testis (PubMed:9038361).

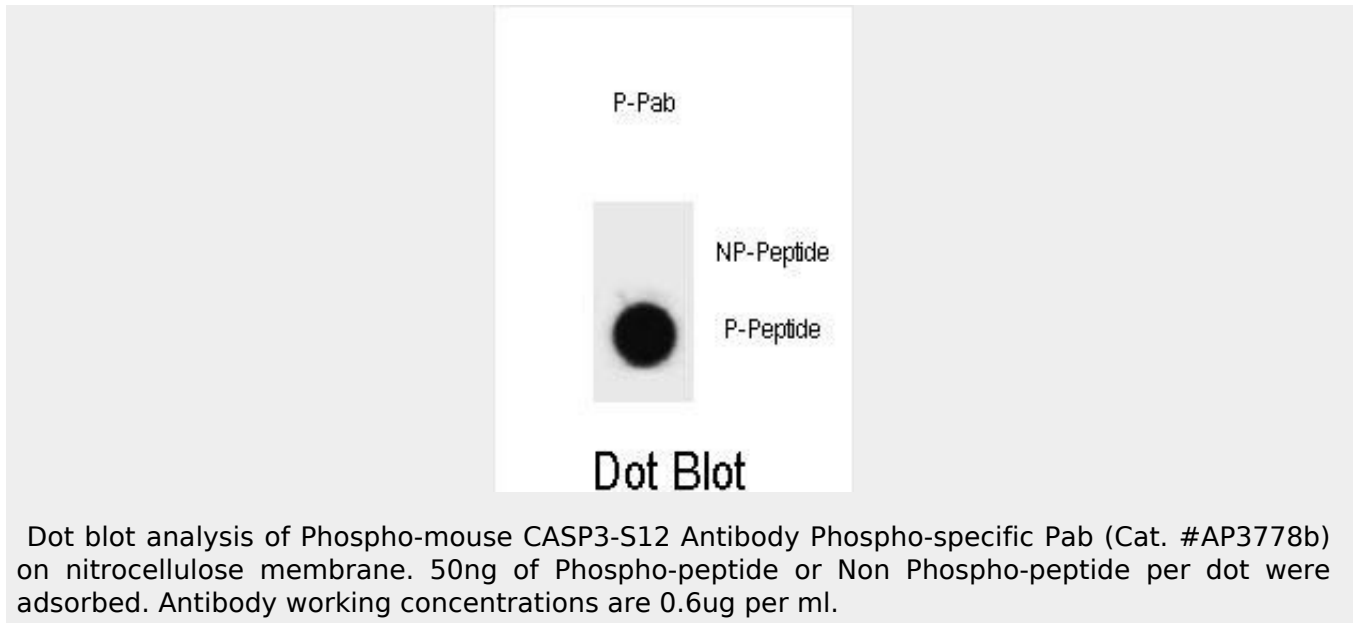
### **Phospho-mouse CASP3(S12) Antibody - Protocols**

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

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### **Phospho-mouse CASP3(S12) Antibody - 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.

### **Phospho-mouse CASP3(S12) Antibody - 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].

### **Phospho-mouse CASP3(S12) Antibody - 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)  
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