

# Caspase-3 Antibody

Rabbit mAb

Catalog # AP90118

## Product Information

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<b>Application</b>	WB, IHC, IF, FC, ICC, IP, IHF
<b>Primary Accession</b>	<a href="#">P42574</a>
<b>Reactivity</b>	Human
<b>Clonality</b>	Monoclonal
<b>Other Names</b>	CASP3; Caspase-3; APOPAIN; CPP32; CPP32B; SCA-1; Caspase3;
<b>Isotype</b>	Rabbit IgG
<b>Host</b>	Rabbit
<b>Calculated MW</b>	31608

## Additional Information

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<b>Dilution</b>	WB 1:500~1:2000 IHC 1:50~1:200 ICC/IF 1:50~1:200 IP 1:50
<b>Purification</b>	Affinity-chromatography
<b>Immunogen</b>	A synthesized peptide derived from human Caspase-3
<b>Description</b>	Caspase-3 (CPP-32, Apoptain, Yama, SCA-1) is a critical executioner of apoptosis, as it is either partially or totally responsible for the proteolytic cleavage of many key proteins such as the nuclear enzyme poly(ADP-ribose) polymerase (PARP). Activation of caspase-3 requires proteolytic processing of its inactive zymogen into activated p17 and p12 fragments. Cleavage of caspase-3 requires aspartic acid at the P1 position.
<b>Storage Condition and Buffer</b>	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.

## Protein Information

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<b>Name</b>	CASP3
<b>Synonyms</b>	CPP32 {ECO:0000303   PubMed:7983002}
<b>Function</b>	Thiol protease that acts as a major effector caspase involved in the execution phase of apoptosis (PubMed: <a href="#">18723680</a> , PubMed: <a href="#">20566630</a> , PubMed: <a href="#">23650375</a> , PubMed: <a href="#">35338844</a> , PubMed: <a href="#">35446120</a> , PubMed: <a href="#">7596430</a> ). Following cleavage and activation by initiator caspases (CASP8, CASP9 and/or CASP10), mediates execution of apoptosis by catalyzing cleavage of many proteins (PubMed: <a href="#">18723680</a> , PubMed: <a href="#">20566630</a> , PubMed: <a href="#">23650375</a> , PubMed: <a href="#">7596430</a> ). At the onset of apoptosis, it proteolytically cleaves poly(ADP-ribose) polymerase PARP1 at a '216-Asp- -Gly-217' bond (PubMed: <a href="#">10497198</a> , PubMed: <a href="#">16374543</a> , PubMed: <a href="#">7596430</a> , PubMed: <a href="#">7774019</a> ). 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 DSG2 in response to apoptosis resulting in a loss of full length DSG2 at desmosome cell junctions and subsequent loss of cell-cell adhesion (PubMed:[17559062](#)). Also cleaves JUP in response to apoptosis (PubMed:[17559062](#)). 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

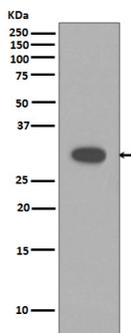
Cytoplasm.

#### 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.

## Images

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Western blot analysis of Caspase-3 in HEK293 cell lysate.

Image not found : 202311/AP90118-IHC.jpg

Immunohistochemical analysis of paraffin-embedded human tonsil, using Caspase-3 Antibody.

Image not found : 202311/AP90118-IF.jpg

Immunofluorescent analysis of Hela cells, using Caspase-3 Antibody .

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