

# Caspase 3 Rabbit mAb

Catalog # AP74990

## Product Information

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<b>Application</b>	WB, IHC-P, IP
<b>Primary Accession</b>	<a href="#">P42574</a>
<b>Reactivity</b>	Rat, Human, Mouse
<b>Host</b>	Rabbit
<b>Clonality</b>	Monoclonal Antibody
<b>Isotype</b>	IgG
<b>Conjugate</b>	Unconjugated
<b>Purification</b>	Affinity Purified
<b>Calculated MW</b>	31608

## Additional Information

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<b>Gene ID</b>	836
<b>Other Names</b>	CASP3
<b>Dilution</b>	WB~~1:500-1:1000 IHC-P~~N/A IP~~1:50-1:100
<b>Format</b>	Liquid in 50mM Tris-Glycine(pH 7.4), 0.15M NaCl, 40%Glycerol, 0.01% sodium azide and 0.05% BSA.
<b>Storage</b>	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.

## 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.

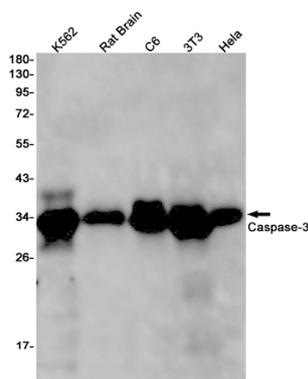
### Tissue Location

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.

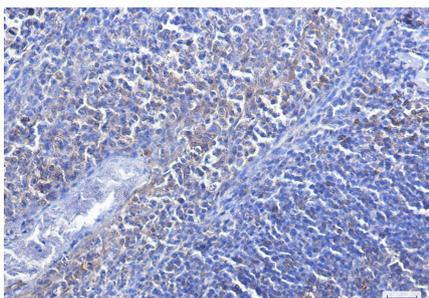
## Background

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 2 subunits, large and small, that dimerize to form the active enzyme.

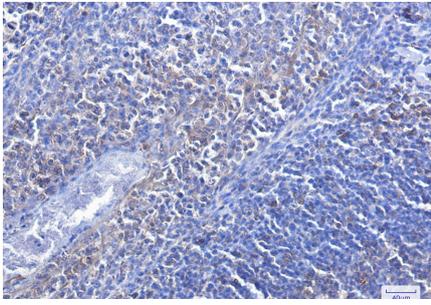
## Images



Western blot analysis of Caspase3 in K562, rat Brain, C6, 3T3, HeLa lysates using Caspase 3 antibody.



Immunohistochemistry analysis of paraffin-embedded Human tonsil using Caspase3 antibody. High-pressure and temperature Sodium Citrate pH 6.0 was used for antigen retrieval.



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