

Caspase-7 (Active) Antibody
Rabbit Polyclonal Antibody
Catalog # ABV10118**Specification**

Caspase-7 (Active) Antibody - Product Information

Application	WB, IHC, IP
Primary Accession	P55210
Other Accession	BAG61059
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	34277

Caspase-7 (Active) Antibody - Additional Information**Gene ID 840**

Application & Usage	Western blotting (0.5-4 µg/ml), immunoprecipitation (10-20 µg/ml), and Immunohistochemistry (10-20 µg/ml). However, the optimal concentrations should be determined individually. The antibody detects only the large subunit of cleaved caspase-7. The antibody does not recognize full length of caspase-7 or other caspases.
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Other Names

CASP7, CASP-7, ICE-LAP3, CMH-1, MCH3, EC 3.4.22.60

Target/Specificity

Caspase-7 (Active)

Antibody Form

Liquid

Appearance

Colorless liquid

Formulation

100 µg (0.2 mg/ml) affinity purified rabbit anti-Active caspase-7 antibody in phosphate-buffered saline (PBS) containing 50% glycerol, 1% BSA, and 0.02% thimerosal

Handling

The antibody solution should be gently mixed before use.

Reconstitution & Storage

-20 °C

Background Descriptions

Precautions

Caspase-7 (Active) Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Caspase-7 (Active) Antibody - Protein Information

Name CASP7 {ECO:0000303|PubMed:9070923, ECO:0000312|HGNC:HGNC:1508}

Function

Thiol protease involved in different programmed cell death processes, such as apoptosis, pyroptosis or granzyme-mediated programmed cell death, by proteolytically cleaving target proteins (PubMed:8521391, PubMed:8567622, PubMed:8576161, PubMed:9070923, PubMed:16916640, PubMed:17646170, PubMed:18723680, PubMed:19581639, PubMed:11257230, PubMed:11257231, PubMed:11701129, PubMed:15314233). Has a marked preference for Asp-Glu-Val-Asp (DEVD) consensus sequences, with some plasticity for alternate non-canonical sequences (PubMed:12824163, PubMed:19581639, PubMed:20566630, PubMed:15314233, PubMed:17697120, PubMed:23897474, PubMed:23650375, PubMed:27032039). Its involvement in the different programmed cell death processes is probably determined by upstream proteases that activate CASP7 (By similarity). Acts as an effector caspase involved in the execution phase of apoptosis: following cleavage and activation by initiator caspases (CASP8, CASP9 and/or CASP10), mediates execution of apoptosis by catalyzing cleavage of proteins, such as CLSPN, PARP1, PTGES3 and YY1 (PubMed:10497198, PubMed:16123041, PubMed:16374543, PubMed:16916640, PubMed:18723680, PubMed:20566630, PubMed:21555521, PubMed:22184066, PubMed:22451931, PubMed:28863261, PubMed:31586028, PubMed:34156061, PubMed:27889207).

target="_blank">27889207, PubMed:35338844, PubMed:35446120). Compared to CASP3, acts as a minor executioner caspase and cleaves a limited set of target proteins (PubMed:18723680). Acts as a key regulator of the inflammatory response in response to bacterial infection by catalyzing cleavage and activation of the sphingomyelin phosphodiesterase SMPD1 in the extracellular milieu, thereby promoting membrane repair (PubMed:21157428). Regulates pyroptosis in intestinal epithelial cells: cleaved and activated by CASP1 in response to *S.typhimurium* infection, promoting its secretion to the extracellular milieu, where it catalyzes activation of SMPD1, generating ceramides that repair membranes and counteract the action of gasdermin-D (GSDMD) pores (By similarity). Regulates granzyme-mediated programmed cell death in hepatocytes: cleaved and activated by granzyme B (GZMB) in response to bacterial infection, promoting its secretion to the extracellular milieu, where it catalyzes activation of SMPD1, generating ceramides that repair membranes and counteract the action of perforin (PRF1) pores (By similarity). Following cleavage by CASP1 in response to inflammasome activation, catalyzes processing and inactivation of PARP1, alleviating the transcription repressor activity of PARP1 (PubMed:22464733). 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 (By similarity). Cleaves and activates sterol regulatory element binding proteins (SREBPs) (PubMed:8643593). Cleaves phospholipid scramblase proteins XKR4, XKR8 and XKR9 (By similarity). In case of infection, catalyzes cleavage of Kaposi sarcoma-associated herpesvirus protein ORF57, thereby preventing expression of viral lytic genes (PubMed:20159985).

Cellular Location

Cytoplasm, cytosol. Nucleus. Secreted, extracellular space {ECO:0000250|UniProtKB:P97864}.

Note=Following cleavage and activation by CASP1 or granzyme B (GZMB), secreted into the extracellular milieu by passing through the gasdermin-D (GSDMD) pores or perforin (PRF1) pore, respectively {ECO:0000250|UniProtKB:P97864}

Tissue Location

Highly expressed in lung, skeletal muscle, liver, kidney, spleen and heart, and moderately in testis. No expression in the brain.

Caspase-7 (Active) 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](#)

Caspase-7 (Active) Antibody - Images

Caspase-7 (Active) Antibody - Background

Caspase-7 has been identified as a major contributor to the execution of apoptosis. Caspase-7 is

cleaved by many enzymes, including caspase-3, -6, -8, -9 and granzyme B. Active caspase-7 consists of a heterotetramer of two large and two small subunits. As an effector caspase, caspase-7 cleaves many of the same substrates as caspase-3, including poly (ADP-ribose) polymerase (PARP). The active caspase-7 antibody provides a new tool for identifying apoptotic cell populations in both tissue sections and cultured cells.