PRODUCT INFORMATION

Caspase-7 (human, recombinant)

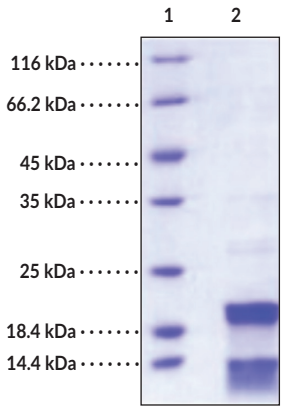
Item No. 43692

Overview and Properties

Synonyms:	CASP-7, Apoptotic Protease Mch-3, CMH-1, ICE-like Apoptotic Protease 3, ICE-LAP3
Source:	Recombinant human C-terminal His-tagged caspase-7 expressed in *E. coli*
Amino Acids:	Met1; 24-303
Uniprot No.:	P55210
Molecular Weight:	35 kDa
Storage:	-80°C (as supplied)
Stability:	≥1 year
Purity:	≥90% estimated by SDS-PAGE
Supplied in:	Lyophilized from sterile 20 mM HEPES, pH 7.5, with 100 mM sodium chloride, 1 mM EDTA, 0.10% sucrose, and 0.1% CHAPS
Protein Concentration:	***batch specific*** mg/ml

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Image



Lane 1: MW Markers
Lane 2: Caspase-7

SDS-PAGE Analysis of Caspase-7. This protein has a calculated molecular weight of 35 kDa.

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Description

Caspase-7 is a cysteinyl aspartic protease and a member of the caspase family of proteases.[1] It is expressed as a proprotein that upon pro-apoptotic signaling is cleaved into two subunits, p20 and p11, which form an active homodimer that recognizes and cleaves proteins containing the amino acid sequence DEVD.[1,2] Caspase-7 is ubiquitously expressed but is found at low levels in the brain and localizes to the cytoplasm.[3] It is an effector caspase and targets the same protein substrates as caspase-3 but is less effective at inducing apoptosis.[4,5] However, it can induce apoptosis in response to specific signaling, such as granzyme B-induced poly(ADP-ribose) polymerase (PARP) cleavage.[3,4] Caspase-7 cleaves and activates acid sphingomyelinase to repair gasdermin D (GSDMD) and perforin pores in the plasma membrane and prevents non-apoptotic forms of cell death.[6] Increased intratumoral levels of cleaved caspase-7 are positively associated with increased overall survival in patients with breast cancer.[7] Cayman's Caspase-7 (human, recombinant) protein was synthesized from a DNA sequence encoding the mature form of human caspase-7 (Ala24-Gln303) with an N-terminal translation-initiating methionine (Met1). The expressed protein consists of 313 amino acids, has a calculated molecular weight of 35 kDa, and a predicted N-terminus of Met1.

References

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7. Lindner, A.U., Lucantoni, F., Varešlija, D., *et al.* Low cleaved caspase-7 levels indicate unfavourable outcome across all breast cancers. *J. Mol. Med. (Berl)* **96(10),** 1025-1037 (2018).

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