Technical Data Sheet

Purified Mouse Anti-Human Caspase-7

Product Information

Material Number: 556541	
Alternate Name: Mch3	
Size: 0.1 mg	
Concentration: 0.5 mg/ml	
Clone: B94-1	
Immunogen: Human Capase-7 aa. 25-42	
Isotype: Mouse IgG1, κ	
Reactivity: QC Testing: Human	
Target MW:35 kDa (pro caspase-7), 17 kDa (active capase-7)	
Storage Buffer: Aqueous buffered solution containing ≤0.09% sodium azide.	

Description

Caspase-7 is a member of a family of cysteine proteases which play a critical role in the induction of apoptosis. Caspase-7 is structurally and functionally most similar to caspase-3. These proteases are expressed as proenzymes which are processed into large and small subunits that associate to form the active enzyme. Caspase-7 may also exist as alternative splice forms, i.e., Mch3 α and Mch3 β . A novel interaction between Mch3 α and the 17 kDa subunit of caspase-3 has been demonstrated *in vitro*, producing a heteromeric enzyme which is proteolytically active. Active caspase-7 can move to the mitochondrial fraction of cells undergoing Fas-mediated apoptosis, whereas active caspase-3 is primarily cytosolic. Caspase-7 is activated by caspase-31 and by granzyme B. Active caspase-7 can cleave the nuclear substrate PARP1 as well as the sterol regulatory element-binding protein 1 (SREBP-1). Caspase-7 migrates at a molecular weight of 35 kDa in SDS/PAGE. Clone B94-1 recognizes the 35 kDa and 17 kDa form human caspase-7. The specificity of the antibody was verified by immunoprecipitation and western blot analysis of active, recombinant human caspase-7 and of endogenous caspase-7 in cell lysates. A synthetic peptide corresponding to amino acids 25-42 of human caspase-7 was used as immunogen.



Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography. Store undiluted at 4°C.

Application Notes

Application						
	Western blot	Routinely Tested				
	Immunoprecipitation	Tested During Development				

Recommended Assay Procedure:

This antibody is routinely tested by western blot analysis $(0.5-1.0 \ \mu g/ml)$. Other applications not routinely tested at BD Biosciences Pharmingen include immunoprecipitation $(1-2 \ \mu g/1 \ x \ 10^{\circ}6 \ cells)$. 293 embryonic kidney (ATCC CRL-1673) are recommended as a positive control. Jurkat T cell leukemia (ATCC TIB-152) and Daudi Burkitt lymphoma (ATCC CCL-213) cell lines may also be used for these applications.

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Suggested Companion Products

Catalog Number	Name	Size	Clone
554002	HRP Goat Anti-Mouse Ig	1.0 ml	(none)

Product Notices

- 1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
- 2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
- 3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before
 - discarding to avoid accumulation of potentially explosive deposits in plumbing.

References

Chandler JM, Cohen GM, MacFarlane M. Different subcellular distribution of caspase-3 and caspase-7 following Fas-induced apoptosis in mouse liver. J Biol Chem. 1998; 273(18):10815-10818. (Clone-specific: Apoptosis)

Chinnaiyan AM, Hanna WL, Orth K. Cytotoxic T-cell-derived granzyme B activates the apoptotic protease ICE-LAP3. Curr Biol. 1996; 6(7):897-899.(Clone-specific: Immunoprecipitation)

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Duan H, Chinnaiyan AM, Hudson PL, Wing JP, He WW, Dixit VM. ICE-LAP3, a novel mammalian homologue of the Caenorhabditis elegans cell death protein Ced-3 is activated during Fas- and tumor necrosis factor-induced apoptosis. *J Biol Chem.* 1996; 271(3):1621-1625.(Biology)

Fernandes-Alnemi T, Takahashi A. Mch3, a novel human apoptotic cysteine protease highly related to CPP32. *Cancer Res.* 1995; 55(24):6045-6052. (Clone-specific: Activation)

Lippke JA, Gu Y, Sarnecki C, Caron PR, Su MS. Identification and characterization of CPP32/Mch2 homolog 1, a novel cysteine protease similar to CPP32. J Biol Chem. 1996; 271(4):1825-1828. (Biology)