Technical Data Sheet

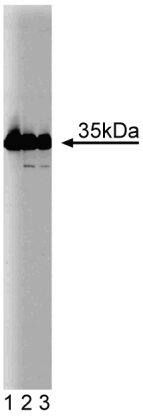
Purified Mouse Anti-Caspase-7

Product Information

Material Number:	**610812**
Alternate Name:	MCH-3
Size:	50 µg
Concentration:	250 µg/ml
Clone:	51/Caspase-7/MCH-3
Immunogen:	Human MCH-3 aa. 4-126
Isotype:	Mouse IgG2b
Reactivity:	QC Testing: Human Tested in Development: Dog
Target MW:	35 kDa
Storage Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium azide.

Description

Apoptosis is induced by cysteine proteases which include Ced-3 of *C.elegans*, Caspase-3 (also known as CPP32, Yama, or apopain), and DCP-1 of *Drosophila*.. Multiple signals, such as activation of Fas and granzyme B, activate Caspase-3 which, in turn, cleaves substrates. Some substrates of Caspase-3 are PARP, MCH-3, MCH-2, U1-associated 70kDa protein, and SREBPs. Caspase-7/MCH-3 is a putative cysteine protease cloned from human Jurkat T lymphocytes. This protein shows significant homology to mammalian interleukin-1β -converting enzyme (ICE), Caspase-3, and the *Caenorhabditis elegans* protein Ced3. All three of these proteins are cytoplasmic cysteine proteases that induce apoptosis when overexpressed in different cell types. This apoptosis can be inhibited by coexpression of Bcl-2. Similar to ICE and Caspase-3, Caspase-7 is a proenzyme that is proteolytically cleaved into p20 and p12 subunits that form the active Caspase-7 heterodimeric complex. Similarity to ICE and Caspase-3, as well as its high levels observed in lymphocytes, suggests that Caspase-7 plays an important role in immunologic apoptosis.



Western blot analysis Capase-7 on HepG2 cell lysate. *Lane 1: 1:1000, lane 2: 1:2000, lane 3: 1:4000 dilution of anti-Capase-7.*

Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.
Store undiluted at -20°C.

Application Notes

Application

Western blot	Routinely Tested
Immunofluorescence	Tested During Development
Immunoprecipitation	Not Recommended
Immunohistochemistry	Not Recommended

Recommended Assay Procedure:

Western blot: Please refer to http://www.bdbiosciences.com/pharmingen/protocols/Western_Blotting.shtml.

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Suggested Companion Products

Catalog Number	Name	Size	Clone
611555	HepG2 Cell Lysate	500 µg	(none)
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.
4. Source of all serum proteins is from USDA inspected abattoirs located in the United States.

References

Deschesnes RG, Huot J, Valerie K, Landry J. Involvement of p38 in apoptosis-associated membrane blebbing and nuclear condensation. *Mol Biol Cell.* 2001; 12(6):1569-1582. (Clone-specific: Western blot)

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

Le'Negrate G, Selva E, Auberger P, Rossi B, Hofman P. Sustained polymorphonuclear leukocyte transmigration induces apoptosis in T84 intestinal epithelial cells. *J Cell Biol.* 2000; 150(6):1479-1488. (Clone-specific: Western blot)

Li X, Marani M, Yu J. Adenovirus-mediated Bax overexpression for the induction of therapeutic apoptosis in prostate cancer. *Cancer Res.* 2001; 61(1):186-191. (Clone-specific: Western blot)

Schlottman K, Wachs FP, Krieg RC, Kullmann F, Schölmerich J, Rogler G. Characterization of bile salt-induced apoptosis in colon cancer cell lines. *Cancer Res.* 2000; 60(15):4270-4276. (Clone-specific: Western blot)