Technical Data Sheet

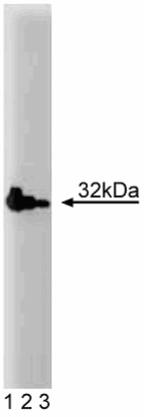
Purified Mouse Anti-Caspase-3

Product Information

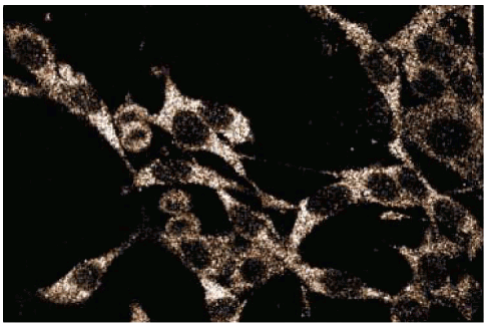
Material Number:	**611049**
Alternate Name:	CPP32
Size:	150 µg
Concentration:	250 µg/ml
Clone:	46/Caspase-3
Immunogen:	Mouse CPP32 aa. 25-145
Isotype:	Mouse IgG1
Reactivity:	QC Testing: Mouse
Target MW:	32 kDa
Storage Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium azide.

Description

Apoptosis, a selective process of genetically programmed cell death, occurs during normal cellular differentiation and development of multicellular organisms. Apoptotic cells are characterized by loss of cell volume, plasma membrane blebbing, nuclear condensation, chromatin aggregation, and endonucleocytic degradation of DNA into nucleosomal fragments. Caspase-3 (CPP32, Yama, apopain) is a member of the family of cysteine proteases which includes interleukin-1beta-converting enzyme (ICE) and *C. elegans* protein, Ced-3. An apoptotic signal such as granzyme B of cytotoxic T-cells (CTLs) or ICE-like proteases induces the intracellular cleavage of Caspase-3 from the inactive proform (32kDa) to the active form which consists of the p20, p17, and p12 subunits. The active form of Caspase-3 cleaves several other apoptotic proteins including proteins such as **D**NA **f**ragmentation **f**actor (DFF). Apoptosis can be inhibited by coexpression of Bcl-2 as well as inhibitors of Caspase-3 or other members of the family of cysteine proteases. This antibody recognizes the mouse 32 kDa pro-Caspase-3 and the p17 cleaved form of Caspase 3 in T cell lymphocytes treated with camptothecin.



Western blot analysis of Caspase-3 on RSV-3T3 lysate. *Lane 1: 1:1000, lane 2: 1:2000, lane 3: 1:4000 dilution of Caspase-3.*



RSV-3T3

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	Tested During Development

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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.
4. Source of all serum proteins is from USDA inspected abattoirs located in the United States.

References

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Hatai T, Matsuzawa A, Inoshita S, et al. Execution of apoptosis signal-regulating kinase 1 (ASK1)-induced apoptosis by the mitochondria-dependent caspase activation. *J Biol Chem.* 2000; 275(34):26576-26581.(Clone-specific: Western blot)

Jia L, Patwari Y, Srinivasula SM, et al. Bax translocation is crucial for the sensitivity of leukaemic cells to etoposide-induced apoptosis. *Oncogene.* 2001; 20(35):4817-4826.(Clone-specific: Western blot)

Li S, Zhao Y, He X, et al. Relief of extrinsic pathway inhibition by the Bid-dependent mitochondrial release of Smac in Fas-mediated hepatocyte apoptosis. *J Biol Chem.* 2002; 277(30):26912-26920.(Clone-specific: Western blot)

Liu X, Kim CN, Yang J, Jemmerson R, Wang X. Induction of apoptotic program in cell-free extracts: requirement for dATP and cytochrome c. *Cell.* 1996; 86(1):147-157.(Biology)