Technical Data Sheet

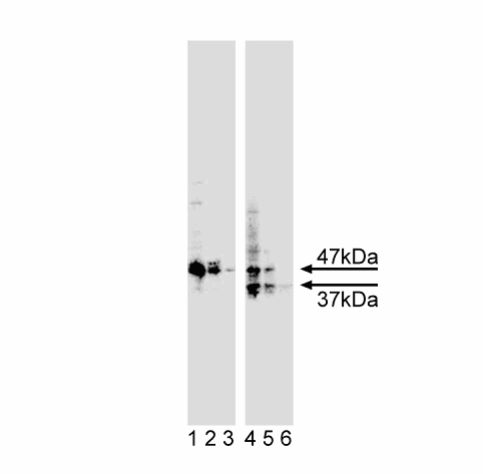
Purified Mouse Anti-Human Caspase-9

Product Information

Material Number:	**551246**
Alternate Name:	ICE-LAP-6, Mch6, Apaf-3
Size:	50 µg
Concentration:	0.5 mg/ml
Clone:	2-22
Immunogen:	Human caspase-9 N-terminal fragment aa 1-134
Isotype:	Mouse IgG1, κ
Reactivity:	QC Testing: Human
Target MW:	47, 37 kDa
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.

Description

The caspase family of cysteine proteases plays a key role in apoptosis and inflammation. Caspases are synthesized as inactive proenzymes containing three domains, that are processed into large and small subunits that associate to form the active enzyme. Processing can occur in apoptotic cells by either transactivation, self-proteolysis or cleavage by another protease. While caspases share a common structure, there are some differences, such as the preferred substrate specificity. These sequence differences in specificity, as well as the size of the NH2 -terminal prodomain, can be used to catagorize the caspases into functional groups including apoptotic initiators (long prodomains), apoptotic executioners (short prodomains), and cytokine processors. Caspase-9 is a member of the apoptotic initiator group of caspases which include caspases-2, -8, and -10. Activation of caspase-9 occurs in the presence of cytochrome c, following an interaction between caspase-9 and APAF-1. Activation may also be triggered directly by the cytotoxic T-cell protease, granzyme B. Active caspase-9 cleaves and thus activates caspase-3, and is also a relevant target of active caspase-3. Caspase-9 can also cleave the nuclear protein PARP. Northern blot analysis suggests that high expression of caspase-9 is found in the heart, testis, and ovary. The antibody recognizes the 47 kDa proform and 37 kDa cleaved form of human caspase-9. The N-terminal fragment (amino acids 1-134) of human caspase-9 was used as an immunogen.



Western blot analysis of caspase-9. *Lysates from control (lanes 1-3) and amptothecin treated Jurkat cells (lanes 4-6) were probed with anti-human caspase-9 (clone 2-22, Cat. No. 551247) at concentrations of: 1.0 (lane 1), 0.5 (lane 2), and 0.25 µg/ml (lane 3). Caspase-9 is identified as a band of 47 kDa (proform), and 37 kDa (intermediate) in treated cells, and the 47 kDa band in control cells.*

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

Recommended Assay Procedure:

Applications include western blot analysis (0.5 - 1.0 µg/ml). Jurkat cells (ATCC TIB-152) are suggested as a positive control. BD Biosciences Pharmingen offers several caspase-9 antibodies. A Jurkat model cell system was used to evaluate these antibodies; these results are summarized in the following table. However, actual bands observed could vary according to the cell model system or treatment used.

BD Biosciences

bdbiosciences.com

United States	Canada	Europe	Japan	Asia Pacific	Latin America/Caribbean
877.232.8995	888.259.0187	32.53.720.550	0120.8555.90	65.6861.0633	55.11.5185.9995

For country-specific contact information, visit **bdbiosciences.com/how_to_order/**

Clone	Catalog Number	Western Blot			Immunoprecipitation		
		47kDa	37kDa	10kDa	47kDa	37kDa	10kDa
B40	556510/66571A	+	-	-	-	-	-
Rabbit polyclonal	556585/68086E	+	-	-	-	-	-
2-22	551246/80861N	+	+	-	-	-	-
Rabbit polyclonal	552036/8127HE	+	+	-	NT	NT	NT

(+) = positive, (-) = negative, (NT) = not tested

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

Cohen GM. Caspases: the executioners of apoptosis. *Biochem J.* 1997; 326(1):1-16.(Biology)

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)

Li P, Nijhawan D, Budihardjo I, et al. Cytochrome c and dATP-dependent formation of Apaf-1/caspase-9 complex initiates an apoptotic protease cascade. *Cell.* 1997; 91(4):479-489.(Biology)

Srinivasula SM, Fernandes-Alnemri T, et al. The Ced-3/interleukin 1beta converting enzyme-like homolog Mch6 and the lamin-cleaving enzyme Mch2alpha are substrates for the apoptotic mediator CPP32. *J Biol Chem.* 1996; 271(43):27099-27106.(Biology)

Thornberry NA, Rano TA, Peterson EP, et al. A combinatorial approach defines specificities of members of the caspase family and granzyme B. Functional relationships established for key mediators of apoptosis. *J Biol Chem.* 1997; 272(29):17907-17911.(Biology)

Wolf BB, Green DR. Suicidal tendencies: apoptotic cell death by caspase family proteinases. *J Biol Chem.* 1999; 274(29):20049-20052.(Biology)