Technical Data Sheet

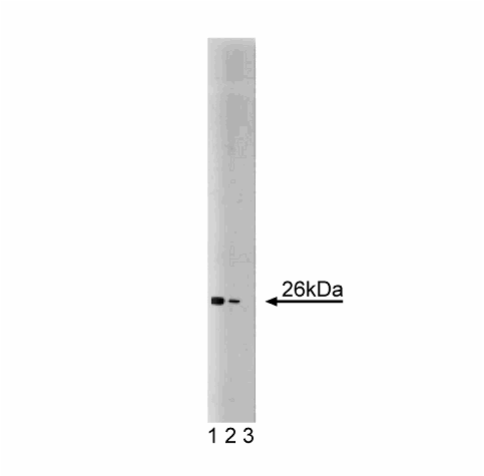
Purified Mouse Anti-Nip1

Product Information

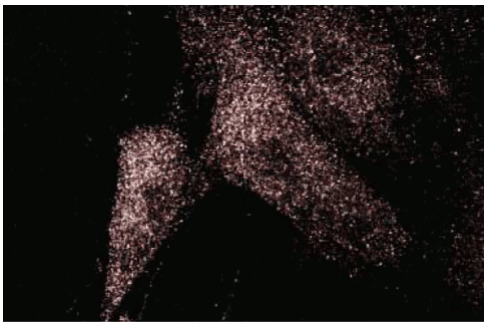
Material Number:	**611096**
Size:	50 µg
Concentration:	250 µg/ml
Clone:	5/Nip1
Immunogen:	Human Nip1 aa. 52-174
Isotype:	Mouse IgG1
Reactivity:	QC Testing: Human Tested in Development: Rat
Target MW:	26 kDa
Storage Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium azide.

Description

Apoptosis, a selective process of genetically programmed cell death, occurs during normal cellular differentiation and development of multicellular organisms. In addition, apoptotic programs in virus-infected cells regulate viral replication and pathogenesis. However, viruses, such as human adenovirus, have evolved methods of circumventing these programs. The adenovirus E1B region encodes a 19 kDa protein (19K) that, similar to Bcl-2, suppresses apoptosis via interactions with intracellular proteins such as Bcl-2 family members. In addition, 19K and Bcl-2 interact with members of a novel subfamily of pro-apoptotic proteins which includes Nip1-3 and Nix. These proteins contain C-terminal transmembrane (TM) domains, such as those found in Bcl-2 proteins. The TM domain is important for targeting of proteins to mitochondria and nuclear envelope/ER regions of the cell. More specifically, Nip1 localizes at the nuclear envelope/ER, while Nip3 localizes in mitochondria and other cytoplasmic membrane structures. In addition, Nip1 shares homology with the catalytic domain of mammalian calcium/calmodulin-dependent cyclic nucleotide phosphodiesterases (PDEs) and may have a PDE-like activity.



Western blot analysis of Nip1 on a A431 cell lysate (Human epithelial carcinoma; ATCC CRL-1555). *Lane 1: 1:250, lane 2: 1:500, lane 3: 1:1000 dilution of the mouse anti-Nip1 antibody.*



Immunofluorescence staining of human fibroblasts.

Preparation and Storage

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

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Application Notes

Application

Western blot	Routinely Tested
Immunofluorescence	Tested During Development

Recommended Assay Procedure:

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

Suggested Companion Products

Catalog Number	Name	Size	Clone
611447	A431 Cell Lysate	500 µg	(none)
554002	HRP Goat Anti-Mouse Ig	1.0 ml	(none)
554001	FITC Goat Anti-Mouse Ig	0.5 mg	Polyclonal

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

Boyd JM, Malstrom S, Subramanian T. Adenovirus E1B 19 kDa and Bcl-2 proteins interact with a common set of cellular proteins. *Cell.* 1994; 79(2):341-351. (Biology)

en G, Cizeau J, Vande Velde C. Nix and Nip3 form a subfamily of pro-apoptotic mitochondrial proteins. *J Biol Chem.* 1999; 274(1):7-10.(Biology)

Yasuda M, Theodorakis P, Subramanian T, Chinnadurai G. Adenovirus E1B-19K/BCL-2 interacting protein BNIP3 contains a BH3 domain and a mitochondrial targeting sequence. *J Biol Chem.* 1998; 273(20):12415-12421.(Biology)