

BNIP-2 (C-20): sc-1714

BACKGROUND

The adenovirus E1B protein is a viral homolog of the Bcl-2 family of proteins that are involved in regulating cell death. A family of interacting proteins, which are designated Nip or Bnip and include BNIP-1, BNIP-2, BNIP-3 and Nix, associate with both the E1B protein and Bcl-2 proteins to mediate apoptotic signaling. BNIP-1 contains a hydrophobic transmembrane domain, which enables its localization to the nuclear envelope, endoplasmic reticulum and mitochondria. BNIP-2, (previously designated Nip2 and Nip21 in human and mouse respectively), shares homology with the non-catalytic domain of Cdc42 GTPase-activating protein (Cdc42GAP). Through binding to Cdc42GAP, BNIP-2 enhances the GTPase activity of Cdc42GAP, facilitating the hydrolysis of GTP bound to Cdc42 and thereby, mediating the signaling pathways involving receptor kinases, small GTPases and apoptotic proteins. Nix, which is also designated Nip3L or Bnip3L, is highly related to BNIP-3, and both proteins localize to the mitochondria where they associate with Bcl-2 proteins. BNIP-3 preferentially binds to Bcl-x_L and induces apoptosis by suppressing the anti-apoptosis activity of Bcl-x_L.

REFERENCES

- Boyd, J.M., et al. 1994. Adenovirus E1B 19 kDa and Bcl-2 proteins interact with a common set of cellular proteins. *Cell* 79: 341-351.
- Chiou, S.K., et al. 1994. Functional complementation of the adenovirus E1B 19-kilodalton protein with Bcl-2 in the inhibition of apoptosis in infected cells. *J. Virol.* 68: 6553-6566.
- Subramanian, T., et al. 1995. Functional substitution identifies a cell survival promoting domain common to adenovirus E1B 19 kDa and Bcl-2 proteins. *Oncogene* 11: 2403-2409.

CHROMOSOMAL LOCATION

Genetic locus: BNIP2 (human) mapping to 15q22.2; Bnip2 (mouse) mapping to 9 D.

SOURCE

BNIP-2 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of BNIP-2 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-1714 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

APPLICATIONS

BNIP-2 (C-20) is recommended for detection of BNIP-2 of mouse and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

BNIP-2 (C-20) is also recommended for detection of BNIP-2 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for BNIP-2 siRNA (h): sc-37450, BNIP-2 siRNA (m): sc-149976, BNIP-2 shRNA Plasmid (h): sc-37450-SH, BNIP-2 shRNA Plasmid (m): sc-149976-SH, BNIP-2 shRNA (h) Lentiviral Particles: sc-37450-V and BNIP-2 shRNA (m) Lentiviral Particles: sc-149976-V.

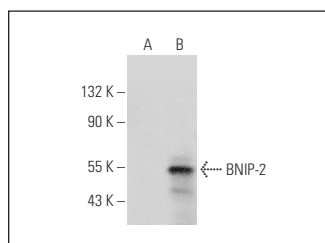
Molecular Weight of BNIP-2 isoform 1/2: 36/43 kDa.

Positive Controls: BNIP-2 (m): 293T Lysate: sc-122068.

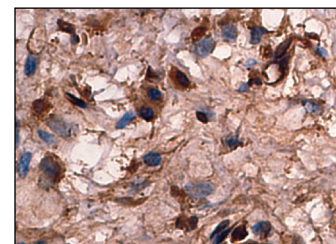
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



BNIP-2 (C-20): sc-1714. Western blot analysis of BNIP-2 expression in non-transfected: sc-117750 (A) and mouse BNIP-2 transfected: sc-122068 (B) whole cell lysates.



BNIP-2 (C-20): sc-1714. Immunoperoxidase staining of formalin fixed, paraffin-embedded human breast tumor showing cytoplasmic localization.

RESEARCH USE

For research use only, not for use in diagnostic procedures.