

## BNIP-2 (H-126): sc-292463

### 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<sub>L</sub> and induces apoptosis by suppressing the anti-apoptosis activity of Bcl-x<sub>L</sub>.

### REFERENCES

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- Chen, G., et al. 1997. The E1B 19K/Bcl-2-binding protein Nip3 is a dimeric mitochondrial protein that activates apoptosis. *J. Exp. Med.* 186: 1975-1983.
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- Low, B.C., et al. 1999. Tyrosine phosphorylation of the Bcl-2-associated protein BNIP-2 by fibroblast growth factor receptor-1 prevents its binding to Cdc42GAP and Cdc42. *J. Biol. Chem.* 274: 33123-33130.
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### CHROMOSOMAL LOCATION

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

### SOURCE

BNIP-2 (H-126) is a rabbit polyclonal antibody raised against amino acids 132-257 mapping within an internal region of BNIP-2 of human origin.

### RESEARCH USE

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

### PRODUCT

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

### APPLICATIONS

BNIP-2 (H-126) is recommended for detection of BNIP-2 of mouse, rat 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

BNIP-2 (H-126) 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.

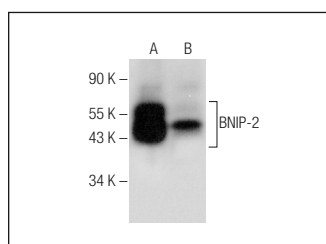
Molecular Weight of BNIP-2 isoform 1/2: 36/43 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204 or MDA-MB-231 cell lysate: sc-2232.

### RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

### DATA



BNIP-2 (H-126): sc-292463. Western blot analysis of BNIP-2 expression in Jurkat (A) and MDA-MB-231 (B) whole cell lysates.

### STORAGE

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