**BNIP-3 (ANα40): sc-56167**

**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-xL and induces apoptosis by suppressing the anti-apoptosis activity of Bcl-xL.

**CHROMOSOMAL LOCATION**

Genetic locus: BNIP3 (human) mapping to 10q26.3; Bnip3 (mouse) mapping to 7 F4.

**SOURCE**

BNIP-3 (ANα40) is a mouse monoclonal antibody raised against amino acids 1-163 of BNIP-3 of human origin.

**PRODUCT**

Each vial contains 200 µg IgG2b, kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

BNIP-3 (ANα40) is available conjugated to agarose (sc-56167 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-56167 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-56167 PE), fluorescein (sc-56167 FITC), Alexa Fluor® 488 (sc-56167 AF488), Alexa Fluor® 546 (sc-56167 AF546), Alexa Fluor® 594 (sc-56167 AF594) or Alexa Fluor® 647 (sc-56167 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-56167 AF680) or Alexa Fluor® 790 (sc-56167 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

**APPLICATIONS**

BNIP-3 (ANα40) is recommended for detection of BNIP-3 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)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for BNIP-3 siRNA (h): sc-37451, BNIP-3 siRNA (m): sc-37452, BNIP-3 shRNA Plasmid (h): sc-37451-SH, BNIP-3 shRNA Plasmid (m): sc-37452-SH, BNIP-3 shRNA (h) Lentiviral Particles: sc-37451-V and BNIP-3 shRNA (m) Lentiviral Particles: sc-37452-V.

Molecular Weight (predicted) of BNIP-3: 22 kDa.

Molecular Weight (observed) of BNIP-3: 22/30/60 kDa.

**STORAGE**

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

**DATA**

**SELECT PRODUCT CITATIONS**


**RESEARCH USE**

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

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