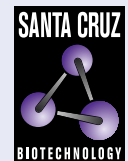


Nix (H-8): sc-166332



The Power to Question

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 Nip1, Nip2, Nip3 and Nix, associate with both the E1B protein and Bcl-2 proteins to mediate apoptotic signaling. Nip1 contains a hydrophobic transmembrane domain, which enables its localization to the nuclear envelope, endoplasmic reticulum and mitochondria. Nip2 shares homology with the non-catalytic domain of Cdc42 GTPase-activating protein (Cdc42GAP). Through binding to Cdc42GAP, Nip2 enhances the GTPase activity of Cdc42, 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 Nip3, and both proteins localize to the mitochondria where they associate with Bcl-2 proteins. Nip3 preferentially binds to Bcl-x_L and induces apoptosis by suppressing the anti-apoptosis activity of Bcl-x_L.

CHROMOSOMAL LOCATION

Genetic locus: BNIP3L (human) mapping to 8p21.2; Bnip3l (mouse) mapping to 14 D1.

SOURCE

Nix (H-8) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 19-47 near the N-terminus of Nix of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} lambda light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Nix (H-8) is available conjugated to agarose (sc-166332 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-166332 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-166332 PE), fluorescein (sc-166332 FITC), Alexa Fluor® 488 (sc-166332 AF488), Alexa Fluor® 546 (sc-166332 AF546), Alexa Fluor® 594 (sc-166332 AF594) or Alexa Fluor® 647 (sc-166332 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-166332 AF680) or Alexa Fluor® 790 (sc-166332 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-166332 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

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 for detailed protocols and support products.

APPLICATIONS

Nix (H-8) is recommended for detection of Nix of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for Nix siRNA (h): sc-37453, Nix siRNA (m): sc-37454, Nix shRNA Plasmid (h): sc-37453-SH, Nix shRNA Plasmid (m): sc-37454-SH, Nix shRNA (h) Lentiviral Particles: sc-37453-V and Nix shRNA (m) Lentiviral Particles: sc-37454-V.

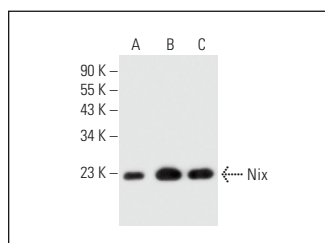
Molecular Weight of Nix homodimer: 48 kDa.

Molecular Weight of Nix monomer: 24 kDa.

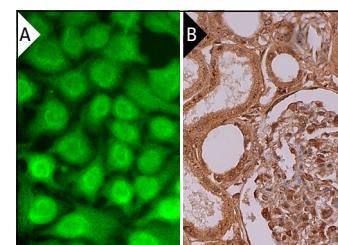
Molecular Weight of Nix C-terminal fragment: 11 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, LADMAC whole cell lysate: sc-364189 or MCF7 whole cell lysate: sc-2206.

DATA



Nix (H-8): sc-166332. Western blot analysis of Nix expression in HeLa (A), LADMAC (B) and MCF7 (C) whole cell lysates.



Nix (H-8): sc-166332. Immunofluorescence staining of formalin-fixed HeLa cells showing cytoplasmic and nuclear localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing cytoplasmic and nuclear staining of cells in glomeruli and cells in tubules (B).

SELECT PRODUCT CITATIONS

- Shi, R.Y., et al. 2014. BNIP3 interacting with LC3 triggers excessive mitophagy in delayed neuronal death in stroke. *CNS Neurosci. Ther.* 20: 1045-1055.
- Dumas, K., et al. 2020. REDD1 deficiency protects against nonalcoholic hepatic steatosis induced by high-fat diet. *FASEB J.* 34: 5046-5060.
- Simpson, C.L., et al. 2021. Nix initiates mitochondrial fragmentation via DRP1 to drive epidermal differentiation. *Cell Rep.* 34: 108689.
- Goldsmith, J., et al. 2022. Brain-derived autophagosome profiling reveals the engulfment of nucleoid-enriched mitochondrial fragments by basal autophagy in neurons. *Neuron* 110: 967-976.e8.

RESEARCH USE

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