SANTA CRUZ BIOTECHNOLOGY, INC.

Nix (E-1): sc-166314

SANTA CRUZ BIOTECHNOLOGY

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 that enables its localization to the nuclear envelope, endoplasmic recticulum 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 Cdc42GAP, facilitating the hydrolysis of GTP bound to Cdc42x 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 (E-1) 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_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-166314 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

Nix (E-1) 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.

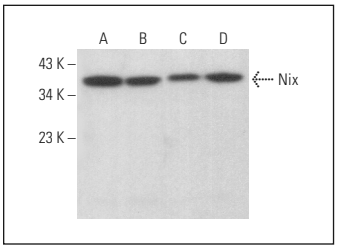
Molecular Weight of Nix C-terminal fragment: 11 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, MCF7 whole cell lysate: sc-2206 or A-431 whole cell lysate: sc-2201.

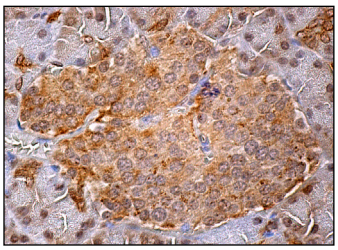
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



Nix (E-1): sc-166314. Western blot analysis of Nix expression in HeLa (**A**), MCF7 (**B**), A-431 (**C**) and U-87 MG (**D**) whole cell lysates.



Nix (E-1): sc-166314. Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing cytoplasmic staining of Islets of Langerhans and nuclear and cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Cheng, H., et al. 2021. Naked mole-rat brown fat thermogenesis is diminished during hypoxia through a rapid decrease in UCP1. Nat. Commun. 12: 6801.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

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