

## Produktinformation



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Diagnostik & molekulare Diagnostik



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# Nix (h2): 293T Lysate: sc-177628



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 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 recticulum 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>1</sub> and induces apoptosis by suppressing the antiapoptosis activity of Bcl-x<sub>1</sub>.

#### **REFERENCES**

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- 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.
- 4. 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.
- 5. Zhang, H., et al. 1999. Novel BNIP1 variants and their interaction with BCL2 family members. FEBS Lett. 448: 23-27.
- Chen, G., et al. 1999. Nix and Nip3 form a subfamily of pro-apoptotic mitochondrial proteins. J. Biol. Chem. 274: 7-10.
- 7. 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.

#### **CHROMOSOMAL LOCATION**

Genetic locus: BNIP3L (human) mapping to 8p21.2.

#### **PRODUCT**

Nix (h2): 293T Lysate represents a lysate of human Nix transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

#### **STORAGE**

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

#### **APPLICATIONS**

Nix (h2): 293T Lysate is suitable as a Western Blotting positive control for human reactive Nix antibodies. Recommended use: 10-20  $\mu$ l per lane.

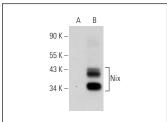
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

Nix (D-1): sc-166114 is recommended as a positive control antibody for Western Blot analysis of enhanced human Nix expression in Nix transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

#### **RECOMMENDED SUPPORT REAGENTS**

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-lgG $\kappa$  BP-HRP: sc-516102 or m-lgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>TM</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

#### **DATA**





Nix (D-1): sc-166114. Western blot analysis of Nix expression in non-transfected: sc-117752 (A) and human Nix transfected: sc-177628 (B) 293T whole cell

Nix (H-8): sc-166332. Western blot analysis of Nix expression in non-transfected: sc-117752 (**A**) and human Nix transfected: sc-177628 (**B**) 293T whole call heater

#### **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.

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