

NIK (H-100): sc-28884

BACKGROUND

The activation of signal transduction pathways by growth factors, hormones and neurotransmitters is mediated through two closely related MAP kinases, p44 and p42, designated extracellular-signal related kinase 1 (ERK 1) and ERK 2, respectively. ERK proteins are regulated by dual phosphorylation at specific tyrosine and threonine sites mapping within a characteristic Thr-Glu-Tyr motif. Phosphorylation at both Thr-183 and Tyr-185 is required for full enzymatic activation. In response to activation, MAP kinases phosphorylate downstream components on serine and threonine. Nik, or nemo-like kinase, is a murine homolog of the *Drosophila* nemo (nmo) gene. Nik and Nmo have sequence homology to both the ERK MAP kinases and the cyclin dependent kinases. Nik is a nuclear protein with the ability to autophosphorylate.

REFERENCES

1. Boulton, T.G. and Cobb, M.H. 1991. Identification of multiple extracellular signal-regulated kinases (ERKs) with antipeptide antibodies. *Cell Reg.* 2: 357-371.
2. Boulton, T.G., et al. 1991. ERKs: a family of protein-serine/threonine kinases that are activated and tyrosine phosphorylated in response to Insulin and NGF. *Cell* 65: 663-675.

CHROMOSOMAL LOCATION

Genetic locus: NLK (human) mapping to 17q11.2; Nik (mouse) mapping to 11 B5.

SOURCE

Nik (H-100) is a rabbit polyclonal antibody raised against amino acids 416-515 mapping at the C-terminus of Nik of human origin.

PRODUCT

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

APPLICATIONS

Nik (H-100) is recommended for detection of Nik 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).

Nik (H-100) is also recommended for detection of Nik in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for Nik siRNA (h): sc-36079, Nik siRNA (m): sc-36080, Nik shRNA Plasmid (h): sc-36079-SH, Nik shRNA Plasmid (m): sc-36080-SH, Nik shRNA (h) Lentiviral Particles: sc-36079-V and Nik shRNA (m) Lentiviral Particles: sc-36080-V.

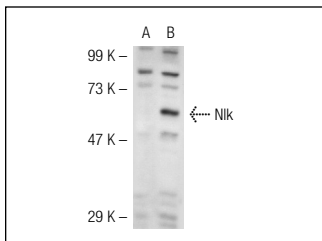
Molecular Weight of Nik: 60 kDa.

Positive Controls: Nik (h): 293T Lysate: sc-116406, rat brain extract: sc-2392 or Nik (m): 293T Lysate: sc-125713.

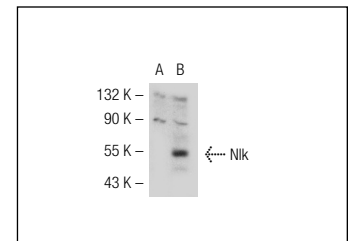
RECOMMENDED SECONDARY REAGENTS

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



Nik (H-100): sc-28884. Western blot analysis of Nik expression in non-transfected: sc-117752 (A) and human Nik transfected: sc-116406 (B) 293T whole cell lysates.



Nik (H-100): sc-28884. Western blot analysis of Nik expression in non-transfected: sc-117752 (A) and mouse Nik transfected: sc-125713 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Szypowska, A.A., et al. 2011. Oxidative stress-dependent regulation of Forkhead box O4 activity by nemo-like kinase. *Antioxid. Redox Signal.* 14: 563-578.

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 or our catalog for detailed protocols and support products.



Try **Nik (B-5): sc-48361** or **Nik (H-2): sc-271323**, our highly recommended monoclonal alternatives to Nik (H-100).