

Nik (C-20): sc-8210

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.
3. Boulton, T.G., et al. 1991. Purification and properties of ERK 1, an Insulin-stimulated MAP2 protein kinase. *Biochemistry* 30: 278-286.
4. Haycock, J.W., et al. 1992. ERK 1 and ERK 2, two microtubule-associated protein 2 kinases, mediate the phosphorylation of tyrosine hydroxylase at serine-31 *in situ*. *Proc. Natl. Acad. Sci. USA* 89: 2365-2369.
5. Crews, C.M. and Erikson, R.L. 1992. Purification of a murine protein-tyrosine/threonine kinase that phosphorylates and activates the Erk-1 gene product: relationship to the fission yeast byr1 gene product. *Proc. Natl. Acad. Sci. USA* 89: 8205-8209.

CHROMOSOMAL LOCATION

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

SOURCE

Nik (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of Nik of mouse origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-8210 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

Nik (C-20) 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) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)].

Nik (C-20) 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.

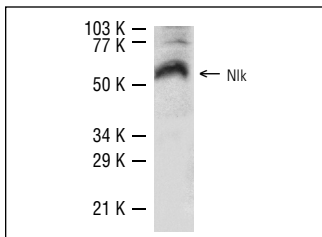
Molecular Weight of Nik: 60 kDa.

Positive Controls: rat brain extract: sc-2392.

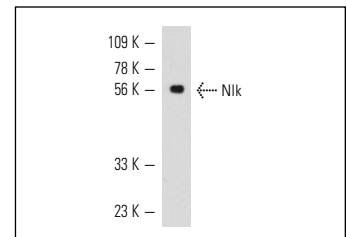
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



Nik (C-20): sc-8210. Western blot analysis of Nik expression in rat brain tissue extract.



Nik (C-20): sc-8210. Western blot analysis of human recombinant Nik.

SELECT PRODUCT CITATIONS

1. Della-Bianca, V., et al. 2001. Neurotrophin p75 receptor is involved in neuronal damage by prion peptide 106-126. *J. Biol. Chem.* 276: 38929-38933.

RESEARCH USE

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



Try **Nik (B-5): sc-48361** or **Nik (H-2): sc-271323**, our highly recommended monoclonal alternatives to Nik (C-20).