

NIK (A-12): sc-8417



The Power to Question

BACKGROUND

The NF κ B transcription factor can be activated by several cytokines including TNF and IL-1. The TNF receptor activates NF κ B through the TRAF2 adaptor protein, whereas the IL-1 receptor activates NF κ B in a pathway involving TRAF6. Both TRAF2 and TRAF6 have been shown to interact with a serine/threonine kinase designated NF κ B inducing kinase (NIK), which appears to participate in the NF κ B signaling cascades triggered by both TNF and IL-1. NIK associates with, and is a costimulator for, I κ B kinase α (IKK α). IKK α in turn, phosphorylates I κ B, resulting in I κ B degradation and NF κ B activation. NIK has sequence similarity to several kinases that participate in MAP kinase cascades. NIK appears to be uninvolved in the TRAF2-mediated activation of JNK by TNF.

CHROMOSOMAL LOCATION

Genetic locus: MAP3K14 (human) mapping to 17q21.31; Map3k14 (mouse) mapping to 11 E1.

SOURCE

NIK (A-12) is a mouse monoclonal antibody raised against amino acids 700-947 mapping at the C-terminus of NIK of human origin.

PRODUCT

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

NIK (A-12) is available conjugated to agarose (sc-8417 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to either phycoerythrin (sc-8417 PE), fluorescein (sc-8417 FITC), Alexa Fluor[®] 488 (sc-8417 AF488), Alexa Fluor[®] 546 (sc-8417 AF546), Alexa Fluor[®] 594 (sc-8417 AF594) or Alexa Fluor[®] 647 (sc-8417 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-8417 AF680) or Alexa Fluor[®] 790 (sc-8417 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

NIK (A-12) 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 μ g per 100-500 μ g 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 NIK siRNA (h): sc-36065, NIK siRNA (m): sc-36066, NIK shRNA Plasmid (h): sc-36065-SH, NIK shRNA Plasmid (m): sc-36066-SH, NIK shRNA (h) Lentiviral Particles: sc-36065-V and NIK shRNA (m) Lentiviral Particles: sc-36066-V.

Molecular Weight of NIK: 130 kDa.

Positive Controls: A549 cell lysate: sc-2413.

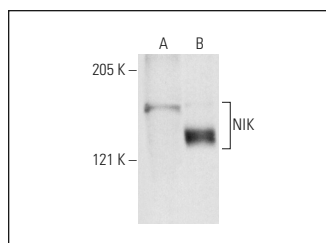
STORAGE

Store at 4 $^{\circ}$ C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

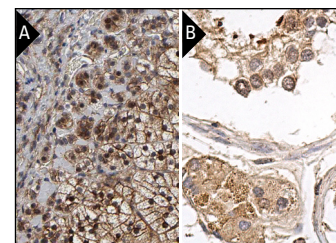
RESEARCH USE

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

DATA



NIK (A-12): sc-8417. Western blot analysis of NIK expression in untreated (A) and NIK transfected (B) COS cells.



NIK (A-12): sc-8417. Immunoperoxidase staining of formalin fixed, paraffin-embedded human adrenal gland tissue showing cytoplasmic and membrane staining of cortical cells. Kindly provided by The Swedish Human Protein Atlas (HPA) program (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human testis tissue showing cytoplasmic staining of cells in seminiferous ducts and Leydig cells (B).

SELECT PRODUCT CITATIONS

- Horie, R., et al. 2002. Cytoplasmic aggregation of TRAF2 and TRAF5 proteins in the Hodgkin-Reed-Sternberg cells. *Am. J. Pathol.* 160: 1647-1654.
- Núñez, C., et al. 2008. TNF/IL-1/NIK/NF κ B transduction pathway: a comparative study in normal and pathological human prostate (benign hyperplasia and carcinoma). *Histopathology* 53: 166-176.
- Yang, S.R., et al. 2009. RelB is differentially regulated by I κ B kinase- α in B cells and mouse lung by cigarette smoke. *Am. J. Respir. Cell Mol. Biol.* 40: 147-158.
- Sánchez-Valdepeñas, C., et al. 2010. Nuclear factor- κ B inducing kinase is required for graft-versus-host disease. *Haematologica* 95: 2111-2118.
- Noort, A.R., et al. 2014. NF κ B-inducing kinase is a key regulator of inflammation-induced and tumour-associated angiogenesis. *J. Pathol.* 234: 375-385.
- Noort, A.R., et al. 2015. Tertiary lymphoid structures in rheumatoid arthritis: NF κ B-inducing kinase-positive endothelial cells as central players. *Am. J. Pathol.* 185: 1935-1943.
- Damgaard, R.B., et al. 2016. The deubiquitinase OTULIN is an essential negative regulator of inflammation and autoimmunity. *Cell* 166: 1215-1230.e20.
- Fan, L.F., et al. 2017. Mdivi-1 ameliorates early brain injury after subarachnoid hemorrhage via the suppression of inflammation-related blood-brain barrier disruption and endoplasmic reticulum stress-based apoptosis. *Free Radic. Biol. Med.* 112: 336-349.

PROTOCOLS

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

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