SANTA CRUZ BIOTECHNOLOGY, INC.

p-NIK (Thr 559): sc-12957

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The NFκB transcription factor can be activated by several cytokines including TNF and IL-1. The TNF receptor activates NFκB through the TRAF2 adaptor protein, whereas the IL-1 receptor activates NFκB in a pathway involving TRAF6. Both TRAF2 and TRAF6 interact with a serine/threonine kinase designated NFκB inducing kinase (NIK), which appears to participate in the NFκB signaling cascades triggered by both TNF and IL-1. Upon phosphorylation of Thr 559 within its kinase domain, NIK is activated. Subsequently, NIK phosphorylates IκB kinase α (IKKα), which, in turn, phosphorylates IκB, resulting in IκB degradation and NFκB activation.

CHROMOSOMAL LOCATION

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

SOURCE

p-NIK (Thr 559) is a goat polyclonal antibody raised against a short amino acid sequence containing Thr 559 phosphorylated 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.

Blocking peptide available for competition studies, sc-12957 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

p-NIK (Thr 559) is recommended for detection of Thr 559 phosphorylated 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).

p-NIK (Thr 559) is also recommended for detection of correspondingly phosphorylated NIK in additional species, including equine, canine, bovine, porcine and avian.

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 p-NIK: 130 kDa.

Positive Controls: A549 cell lysate: sc-2413.

STORAGE

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

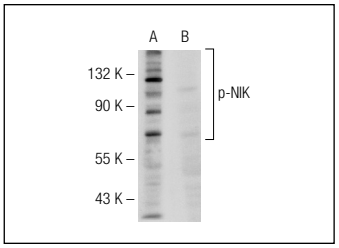
PROTOCOLS

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

RESEARCH USE

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

DATA



p-NIK (Thr 559)-R: sc-12957-R. Western blot analysis of NIK phosphorylation in untreated (**A**) and lambda protein phosphatase (sc-200312A) treated (**B**) A549 whole cell lysates.

SELECT PRODUCT CITATIONS

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3. Jain, S., et al. 2006. The crucial role of cyclooxygenase-2 in osteopontin-induced protein kinase C α/c-Src/IκB kinase α/β-dependent prostate tumor progression and angiogenesis. Cancer Res. 66: 6638-6648.
4. Lee, S.J., et al. 2008. CT20126, a novel immunosuppressant, prevents collagen-induced arthritis through the downregulation of inflammatory gene expression by inhibiting NFκB activation. Biochem. Pharmacol. 76: 79-90.
5. Bhattacharyya, S., et al. 2010. B cell CLL/lymphoma 10 (Bcl10) is required for NFκB production by both canonical and noncanonical pathways and for NFκB-inducing kinase (NIK) phosphorylation. J. Biol. Chem. 285: 522-530.
6. Jin, X., et al. 2010. An atypical E3 ligase zinc finger protein 91 stabilizes and activates NFκB-inducing kinase via Lys63-linked ubiquitination. J. Biol. Chem. 285: 30539-30547.
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8. Xu, Y., et al. 2010. RelB-dependent differential radiosensitization effect of STI571 on prostate cancer cells. Mol. Cancer Ther. 9: 803-812.
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