

TBK1 (S-15): sc-9912

BACKGROUND

The transcription factor NF κ B is retained in the cytoplasm in an inactive form by the inhibitory protein I κ B. Activation of NF κ B requires that I κ B be phosphorylated on specific serine residues, which results in targeted degradation of I κ B. I κ B kinase α (IKK α), previously designated CHUK, interacts with I κ B- α and specifically phosphorylates I κ B- α on the sites that trigger its degradation, Serines 32 and 36. The functional IKK complex contains three subunits, IKK α , IKK β and IKK γ (also designated NEMO), and each appear to make essential contributions to I κ B phosphorylation. TANK binding kinase (TBK1), also designated T2K, is a novel IKK-related kinase that has been identified in murine and human tissues. TBK1 was shown to complex with TRAF2 and TANK in the NF κ B activation pathway. TBK1 shares homology with IKK α and IKK β in the amino-terminal half, which includes the kinase domain.

REFERENCES

1. Verma, I.M., et al. 1995. Rel/NF- κ B/I κ B family: intimate tales of association and dissociation. *Genes Dev.* 9: 2723-2735.
2. Thanos, D., et al. 1995. NF κ B: a lesson in family values. *Cell* 80: 529-532.
3. Connelly, M.A., et al. 1995. CHUK, a new member of the helix-loop-helix and leucine zipper families of interacting proteins, contains a serine-threonine kinase catalytic domain. *Cell. Mol. Biol. Res.* 41: 537-549.
4. DiDonato, J.A., et al. 1997. A cytokine-responsive I κ -B kinase that activates the transcription factor NF κ B. *Nature* 388: 548-554.
5. Regnier, C.H., et al. 1997. Identification and characterization of an I κ B kinase. *Cell* 90: 373-383.
6. Zandi, E., et al. 1997. The I κ B kinase complex (IKK) contains two kinase subunits, IKK α and IKK β , necessary for I κ B phosphorylation and NF κ B activation. *Cell* 91: 243-252.

CHROMOSOMAL LOCATION

Genetic locus: TBK1 (human) mapping to 12q14.2; Tbk1 (mouse) mapping to 10 D2.

SOURCE

TBK1 (S-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of TBK1 of mouse origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-9912 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

TBK1 (S-15) is recommended for detection of TBK1 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

TBK1 (S-15) is also recommended for detection of TBK1 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for TBK1 siRNA (h): sc-39058, TBK1 siRNA (m): sc-39059, TBK1 shRNA Plasmid (h): sc-39058-SH, TBK1 shRNA Plasmid (m): sc-39059-SH, TBK1 shRNA (h) Lentiviral Particles: sc-39058-V and TBK1 shRNA (m) Lentiviral Particles: sc-39059-V.

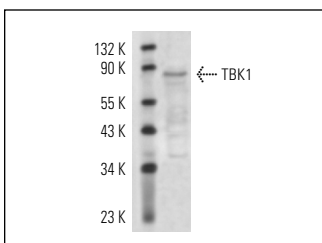
Molecular Weight of TBK1: 80 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206, Jurkat whole cell lysate: sc-2204 or RAW 264.7 whole cell lysate: sc-2211.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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



TBK1 (S-15): sc-9912. Western blot analysis of TBK1 expression in MCF7 whole cell lysate.

RESEARCH USE

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

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Try **TBK1 (A-6): sc-398366** or **TBK1 (6D603): sc-73115**, our highly recommended monoclonal alternatives to TBK1 (S-15).