SANTA CRUZ BIOTECHNOLOGY, INC.

TBK1 (M-375): sc-9085

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The Power to Question

BACKGROUND

The transcription factor NFκB is retained in the cytoplasm in an inactive form by the inhibitory protein IκB. Activation of NFκB requires that IκB be phosphorylated on specific serine residues, which results in targeted degradation of IκB. IκB kinase α (IKKα), previously designated CHUK, interacts with IκB-α and specifically phosphorylates IκB-α on the sites that trigger its degradation, Serines 32 and 36. The functional IKK complex contains three subunits, IKKα, IKKβ and IKKγ (also designated NEMO), and each appear to make essential contributions to IκB 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 NFκB activation pathway. TBK1 shares homology with IKKα and IKKβ in the amino-terminal half, which includes the kinase domain.

CHROMOSOMAL LOCATION

Genetic locus: TBK1 (human) mapping to 12q14.1; Tbk1 (mouse) mapping to 10 D2.

SOURCE

TBK1 (M-375) is a rabbit polyclonal antibody raised against amino acids 355-729 mapping at the C-terminus of TBK1 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.

APPLICATIONS

TBK1 (M-375) 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 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).

TBK1 (M-375) is also recommended for detection of TBK1 in additional species, including equine, canine, bovine and porcine.

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: TBK1 (h): 293T Lysate: sc-159010, MCF7 whole cell lysate: sc-2206 or RAW 264.7 whole cell lysate: sc-2211.

RESEARCH USE

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

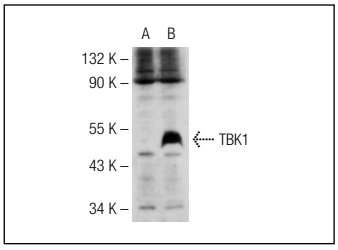
PROTOCOLS

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

STORAGE

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

DATA



TBK1 (M-375): sc-9085. Western blot analysis of TBK1 expression in non-transfected: sc-117752 (**A**) and human TBK1 transfected: sc-159010 (**B**) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Kishore, N., et al. 2002. IKK-i and TBK1 are enzymatically distinct from the homologous enzyme IKK-2: comparative analysis of recombinant human IKK-i, TBK1, and IKK-2. J. Biol. Chem. 277: 13840-13847.
2. Buss, H., et al. 2004. Constitutive and interleukin-1-inducible phosphorylation of p65 NFκB at Serine 536 is mediated by multiple protein kinases including IκB kinase (IKKα), IKKβ, IKKε, TRAF family member-associated (TANK)-binding kinase 1 (TBK1), and an unknown kinase and couples p65 to TATA-binding protein-associated factor II31-mediated interleukin-8 transcription. J. Biol. Chem. 53: 55633-55643.
3. Lin, R., et al. 2004. The herpes simplex virus ICP0 RING finger domain inhibits IRF3- and IRF7-mediated activation of interferon-stimulated genes. J. Virol. 78: 1675-1684.
4. Siren, J, et al. 2005. IFN-α regulates TLR-dependent gene expression of IFN-α, IFN-β, IL-28, and IL-29. J. Immunol. 174: 1932-1937.
5. Ear, T., et al. 2005. Constitutive nuclear expression of the IκB kinase complex and its activation in human neutrophils. J. Immunol. 175: 1834-1842.
6. Zhang, M., et al. 2008. Regulation of IκB kinase-related kinases and antiviral responses by tumor suppressor CYLD. J. Biol. Chem. 283: 18621-18626.
7. Deng, W., et al. 2008. Negative regulation of virus-triggered IFN-β signaling pathway by alternative splicing of TBK1. J. Biol. Chem. 283: 35590-35597.

MONOS Satisfaction Guaranteed

Try **TBK1 (A-6): sc-398366** or **TBK1 (6D603): sc-73115**, our highly recommended monoclonal alternatives to TBK1 (M-375).