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Datasheet for 600-401-MK6S

TBK1 Antibody

Overview

Description:	Anti-TBK1 (RABBIT) Antibody - 600-401-MK6S
Item No.:	600-401-MK6S
Size:	25 µL
Applications:	ELISA, IF, WB
Reactivity:	Human, Mouse
Host Species:	Rabbit

Product Details

Background:	TBK1 (TANK Binding Kinase 1) is a serine/threonine kinase that plays an essential role in regulating inflammatory responses to foreign agents. Following activation of toll-like receptors by viral or bacterial components, it associates with TRAF3 and TANK and phosphorylates interferon regulatory factors (IRFs) IRF3 and IRF7 as well as DDX3X. This activity allows subsequent homodimerization and nuclear translocation of the IRFs leading to transcriptional activation of pro-inflammatory and antiviral genes including IFNA and IFNB. In order to establish such an antiviral state, TBK1 forms several different complexes whose composition depends on the type of cell and cellular stimuli. Thus, several scaffolding molecules including FADD, TRADD, MAVS, AZI2, TANK or TBKBP1/SINTBAD can be recruited to the TBK1-containing-complexes. Under particular conditions, it functions as a NF-kappa-B effector by phosphorylating NF-kappa-B inhibitor alpha/NFKBIA, IKBKB, or RELA to translocate NF-Kappa-B to the nucleus. It restricts bacterial proliferation by phosphorylating the autophagy receptor OPTN/Optineurin on Ser-177, thus enhancing LC3 binding affinity and antibacterial autophagy. TKB1 phosphorylates the SMCR8 component of the C9orf72-SMCR8 complex, promoting autophagosome maturation. And it phosphorylates and activates AKT1. Seems to play a role in energy balance regulation by sustaining a state of chronic, low-grade inflammation in obesity, which leads to a negative impact on insulin sensitivity. Attenuates retroviral budding by phosphorylating the endosomal sorting complex required for transport-I (ESCRT-I) subunit VPS37C. And it phosphorylates Borna disease virus (BDV) P protein. Anti-TBK1 Antibody is useful for researchers interested in Frontotemporal Dementia and/or Amyotrophic Lateral Sclerosis 4, acute Infection-Induced 8 Encephalopathy, Toll-like Receptor Signaling Pathway, TNFR1 Pathway, nucleic acid binding, and protein kinase activity.
Synonyms:	Rabbit Anti-TRK1 Antibody, Rabbit Anti-TANK Binding Kinase 1 Antibody, NF-Kappa-B-Activating Kinase, TANK-Binding Kinase 1, NAK, T2K, Serine/Threonine-Protein Kinase TBK1, NF-KB-Activating Kinase, EC 2.7.11.1, FTDALS4, IIAE8

Host Species:	Rabbit
Clonality:	Polyclonal
Format:	IgG

Target Details

Gene Name:	TBK1
Reactivity:	Human, Mouse
Immunogen Type:	Conjugated Peptide
Immunogen:	Anti-TBK1 antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic peptide corresponding to a C-terminal portion of human TBK1 conjugated to Keyhole Limpet Hemocyanin (KLH).
Purity/Specificity:	This affinity purified antibody is directed against human TBK1. This product was affinity purified from monospecific antiserum by immunoaffinity purification. A BLAST analysis was used to suggest cross-reactivity with the antigen based on 100% homology with the immunizing sequence to mouse.
Relevant Links:	• GeneID - 9123 • NCBI - NP_001035887.1 • UniProtKB - Q9UHD2

Application Details

Tested Applications:	ELISA, IF, WB
Application Note:	Anti-TBK1 Antibody has been tested in ELISA, WB, and IF. Expect a band at ~83.6kDa in western blot using appropriate lysates. Positive control used: TBK1 overexpressed lysate, HEK, or NIH3T3 in WB; HeLa in IF.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	5 µg/ml
IF:	15 µg/ml
IHC:	1:100
WB:	1:1000

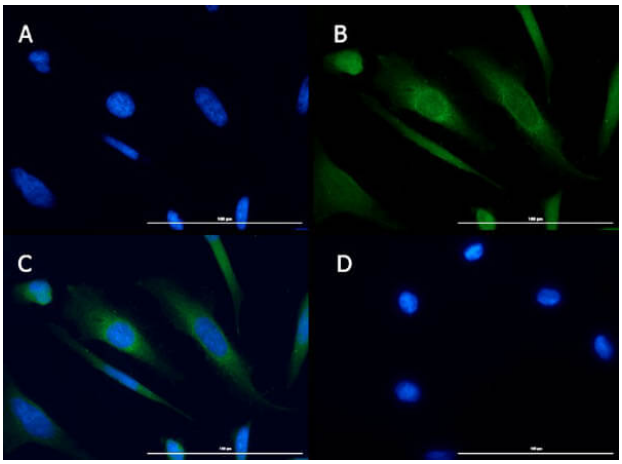
Formulation

Physical State:	Liquid (sterile filtered)
Concentration:	1.0 mg/ml by UV absorbance at 280 nm
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	0.01% (w/v) Sodium Azide
Stabilizer:	None

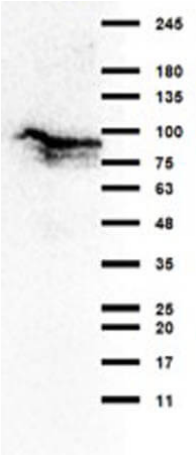
Shipping & Handling

Shipping Condition:	Dry Ice
Storage Condition:	Store vial at -20° C or below prior to opening. This vial contains a relatively low volume of reagent (25 µL). To minimize loss of volume dilute 1:10 by adding 225 µL of the buffer stated above directly to the vial. Recap, mix thoroughly and briefly centrifuge to collect the volume at the bottom of the vial. Use this intermediate dilution when calculating final dilutions as recommended below. Store the vial at -20°C or below after dilution. Avoid cycles of freezing and thawing.
Expiration:	Expiration date is one (1) year from date of receipt.

Images



Immunofluorescence Microscopy
Immunofluorescence of Rabbit Anti-TBK1 Antibody. Cell Line: HeLa Cells. Fixation: 4% PFA. Permeabilization: 0.3% Triton X-100. Primary Antibody: Anti-TBK1 at 15µg/mL overnight at 4°C. Stain: DAPI. Counterstain: Donkey Anti-Rabbit IgG Dylight488 (p/n 611-741-127) at 5µL for 1 hr at RT. Expect Location: Cytoplasm. Image A) DAPI. B) Anti-TBK1 + DyLight488. C) Merge A+B. D) Secondary only.



Western Blot

Western Blot of Rabbit Anti-TBK1 Antibody. Lane 1: NIH-3T3 Lysate (p/n W10-000-358). Lane 2: Opal Prestained Molecular Weight Marker (p/n 210-0500). Primary Antibody: Anti-TBK1 at 1:1000 overnight at 4°C. Secondary Antibody: Goat anti-Rabbit HRP (p/n 611-103-122) at 1:70,000 fot 1hour at RT. Block: BlockOut Buffer (p/n MB-073). Expect: ~83kDa.

Disclaimer

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