

TAB1 (C-20): sc-6053

BACKGROUND

The TAK1 binding proteins, TAB1, TAB2 and TAB3, interact with the MAPKKK TAK1 in response to various stimuli. TAB1 activates TAK1 in TGF β mediated signaling. TAB1 also plays a central role in a p38 α activation pathway that is independent of MAPKK. In response to proinflammatory signals, TAB2 complexes with TRAF6 and TAK1, leading to translocation of the complex from the membrane to the cytosol and the subsequent activation of TAK1. When overexpressed, TAB3 activates both NF κ B and AP-1 transcription factors. In response to TNF α or IL-1, TAK1 complexes with TAB1 and TAB2 or with TAB1 and TAB3 to yield two distinct complexes.

CHROMOSOMAL LOCATION

Genetic locus: TAB1 (human) mapping to 22q13.1; Tab1 (mouse) mapping to 15 E1.

SOURCE

TAB1 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of TAB1 of human 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-6053 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

TAB1 (C-20) is recommended for detection of TAB1 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).

TAB1 (C-20) is also recommended for detection of TAB1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for TAB1 siRNA (h): sc-36600, TAB1 siRNA (m): sc-36601, TAB1 shRNA Plasmid (h): sc-36600-SH, TAB1 shRNA Plasmid (m): sc-36601-SH, TAB1 shRNA (h) Lentiviral Particles: sc-36600-V and TAB1 shRNA (m) Lentiviral Particles: sc-36601-V.

Molecular Weight of TAB1: 56 kDa.

Positive Controls: TAB1 (h): 293T Lysate: sc-116261, K-562 whole cell lysate: sc-2203 or HeLa whole cell lysate: sc-2200.

RESEARCH USE

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

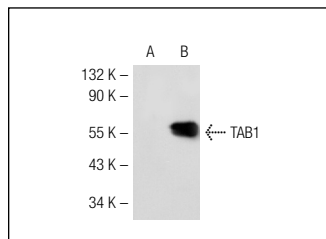
PROTOCOLS

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

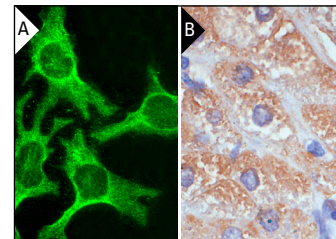
STORAGE

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

DATA



TAB1 (C-20): sc-6053. Western blot analysis of TAB1 expression in non-transfected: sc-117752 (A) and human TAB1 transfected: sc-116261 (B) 293T whole cell lysates.



TAB1 (C-20): sc-6053. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (A). Immunoperoxidase staining of formalin-fixed, paraffin-embedded human liver tissue showing cytoplasmic staining (B).

SELECT PRODUCT CITATIONS

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2. Singhirunnusorn, P., et al. 2005. Critical roles of threonine 187 phosphorylation in cellular stress-induced rapid and transient activation of transforming growth factor β -activated kinase 1 (TAK1) in a signaling complex containing TAK1-binding protein TAB1 and TAB2. *J. Biol. Chem.* 280: 7359-7368.
3. Thieffes, A., et al. 2006. The *Yersinia enterocolitica* effector YopP inhibits host cell signalling by inactivating the protein kinase TAK1 in the IL-1 signalling pathway. *EMBO Rep.* 7: 838-844.
4. Choo, M.K., et al. 2006. Blockade of transforming growth factor- β -activated kinase 1 activity enhances TRAIL-induced apoptosis through activation of a caspase cascade. *Mol. Cancer Ther.* 5: 2970-2976.
5. Choo, M.K., et al. 2006. TAK1-mediated stress signaling pathways are essential for TNF- α -promoted pulmonary metastasis of murine colon cancer cells. *Int. J. Cancer* 118: 2758-2764.
6. Suzuki, S., et al. 2007. Constitutive activation of TAK1 by HTLV-1 tax-dependent overexpression of TAB2 induces activation of JNK-ATF2 but not IKK-NF κ B. *J. Biol. Chem.* 282: 25177-25181.
7. Kamiyama, H., et al. 2008. Epoxyquinol B, a naturally occurring pentaketide dimer, inhibits NF κ B signaling by crosslinking TAK1. *Biosci. Biotechnol. Biochem.* 72: 1894-1900.
8. Nishimura, M., et al. 2009. TAK1-mediated serine/threonine phosphorylation of epidermal growth factor receptor via p38/extracellular signal-regulated kinase: NF κ B-independent survival pathways in tumor necrosis factor α signaling. *Mol. Cell. Biol.* 29: 5529-5539.
9. Shin, M.S., et al. 2009. Cross interference with TNF- α -induced TAK1 activation via EGFR-mediated p38 phosphorylation of TAK1-binding protein 1. *Biochim. Biophys. Acta* 1793: 1156-1164.