

TAB3 (T-14): sc-46550

BACKGROUND

TAB1, TAB2 and TAB3 (for TAK1 binding proteins) interact with the MAPKKK TAK1 in response to various stimuli. TAB1 activates TAK1 in TGF β -mediated signaling. 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. Both TAB2 and TAB3 are important mediators of TAK1 activation in IL-1 and TNF signal transduction.

REFERENCES

1. Yamaguchi, K., et al. 1995. Identification of a member of the MAPKKK family as a potential mediator of TGF β signal transduction. *Science* 270: 2008-2011.
2. Shibuya, H., et al. 1996. TAB1: an activator of the TAK1 MAPKKK in TGF β signal transduction. *Science* 272: 1179-1182.
3. Ge, B., et al. 2002. MAPKK-independent activation of p38 α mediated by TAB1-dependent autophosphorylation of p38 α . *Science* 295: 1291-1294.
4. Jiang, Z, et al. 2002. Interleukin-1 (IL-1) receptor-associated kinase-dependent IL-1-induced signaling complexes phosphorylate TAK1 and TAB2 at the plasma membrane and activate TAK1 in the cytosol. *Mol. Cell. Biol.* 22: 7158-7167.
5. Ishitani, T., et al. 2003. Role of the TAB2-related protein TAB3 in IL-1 and TNF signaling. *EMBO J.* 22: 6277-6288.
6. Kanayama, A., et al. 2004. TAB2 and TAB3 activate the NF κ B pathway through binding to polyubiquitin chains. *Mol. Cell* 15: 535-548.
7. Jin, G., et al. 2004. Identification of a human NF κ B-activating protein, TAB3. *Proc. Natl. Acad. Sci. USA* 101: 2028-2033.
8. Cheung, P.C., et al. 2004. TAB3, a new binding partner of the protein kinase TAK1. *Biochem. J.* 378: 27-34.

CHROMOSOMAL LOCATION

Genetic locus: TAB3 (human) mapping to Xp21.2; Tab3 (mouse) mapping to X C1.

SOURCE

TAB3 (T-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of TAB3 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-46550 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

TAB3 (T-14) is recommended for detection of TAB3 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

TAB3 (T-14) is also recommended for detection of TAB3 in additional species, including equine, canine, porcine and avian.

Suitable for use as control antibody for TAB3 siRNA (h): sc-43548, TAB3 siRNA (m): sc-43549, TAB3 shRNA Plasmid (h): sc-43548-SH, TAB3 shRNA Plasmid (m): sc-43549-SH, TAB3 shRNA (h) Lentiviral Particles: sc-43548-V and TAB3 shRNA (m) Lentiviral Particles: sc-43549-V.

Molecular Weight of TAB3: 90 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227 or c4 whole cell lysate: sc-364186.

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) 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.

SELECT PRODUCT CITATIONS

1. Ear, T., et al. 2010. Constitutive association of TGF- β -activated kinase 1 with the I κ B kinase complex in the nucleus and cytoplasm of human neutrophils and its impact on downstream processes. *J. Immunol.* 184: 3897-3906.

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.



Try **TAB3 (D-9): sc-166538**, our highly recommended monoclonal alternative to TAB3 (T-14).