

# Tak1L (M-77): sc-292804

## BACKGROUND

Several serine/threonine protein kinases have been implicated as intermediates in signal transduction pathways. These include ERK/MAP kinases, ribosomal S6 kinase (Rsk) and Raf-1. Raf-1 is a protein with intrinsic kinase activity towards serine/threonine residues and is widely expressed in many tissue types and cell lines. Raf-1 activation is dependent on the small molecular weight GTPase Ras. Two proteins putatively involved in this process are Ksr-1 and Tak1. Ksr-1 (kinase suppressor of Ras) is a novel Raf-related protein kinase whose function is required for Ras signal transduction. Whether Ksr-1 lies directly downstream of Ras or acts in a parallel pathway is not yet known. Tak1 (TGF $\beta$ -activated kinase) has been shown to participate in the activation of the MAP kinase family in response to TGF $\beta$  stimulation. Tak1L (Tak1-like protein), also known as C21orf7, is a 242 amino acid protein that shares homology with the C-terminal tail of Tak1. Tak1L is expressed predominantly in peripheral blood leukocytes, with strong expression found in the adenocarcinomic cell lines GI-112 and PC-3 and the carcinomic cell line GI-101.

## REFERENCES

- Huleihel, M., et al. 1986. Characterization of murine A-Raf, a new oncogene related to the v-Raf oncogene. *Mol. Cell. Biol.* 6: 2655-2662.
- Ray, L.B. and Sturgill, T.W. 1988. Insulin-stimulated microtubule-associated protein kinase is phosphorylated on tyrosine and threonine *in vivo*. *Proc. Natl. Acad. Sci. USA* 85: 3753-3757.
- Morrison, D.K., et al. 1988. Signal transduction from membrane to cytoplasm: growth factors and membrane-bound oncogene products increase Raf-1 phosphorylation and associated protein kinase activity. *Proc. Natl. Acad. Sci. USA* 85: 8855-8859.
- Pelech, S.L., et al. 1990. Protein kinase cascades in meiotic and mitotic cell cycle control. *Biochem. Cell Biol.* 68: 1297-1330.

## CHROMOSOMAL LOCATION

Genetic locus: ORF63 (mouse) mapping to 16 C3.3.

## SOURCE

Tak1L (M-77) is a rabbit polyclonal antibody raised against amino acids 1-77 mapping at the N-terminus of Tak1L of mouse origin.

## PRODUCT

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

## 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](http://www.scbt.com) or our catalog for detailed protocols and support products.

## APPLICATIONS

Tak1L (M-77) is recommended for detection of Tak1L of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ 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).

Tak1L (M-77) is also recommended for detection of Tak1L in additional species, including equine, canine and bovine.

Suitable for use as control antibody for Tak1L siRNA (m): sc-154063, Tak1L shRNA Plasmid (m): sc-154063-SH and Tak1L shRNA (m) Lentiviral Particles: sc-154063-V.

Molecular Weight (predicted) of Tak1L isoforms: 27/15/16 kDa.

Molecular Weight (observed) of human Tak1L: 30 kDa.

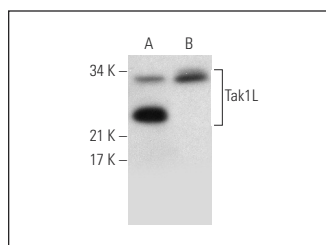
Molecular Weight (observed) of mouse Tak1L: 32/22 kDa.

Positive Controls: KNRK whole cell lysate: sc-2214, mouse prostate extract: sc-364249 or mouse kidney extract: sc-2255.

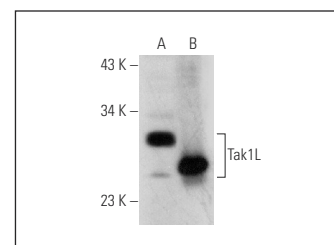
## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



Tak1L (M-77): sc-292804. Western blot analysis of Tak1L expression in mouse kidney tissue extract (A) and NIH/3T3 whole cell lysate (B).



Tak1L (M-77): sc-292804. Western blot analysis of Tak1L expression in KNRK whole cell lysate (A) and mouse prostate tissue extract (B).

## RESEARCH USE

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