SANTA CRUZ BIOTECHNOLOGY, INC.

Tak1L (G-8): sc-515478

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 (TGFβ-activated kinase) has been shown to participate in the activation of the MAP kinase family in response to TGFβ 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

1. 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.
2. 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.
3. 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.

CHROMOSOMAL LOCATION

Genetic locus: MAP3K7CL (human) mapping to 21q21.3.

SOURCE

Tak1L (G-8) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 79-96 within an internal region of Tak1L of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Tak1L (G-8) is available conjugated to agarose (sc-515478 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-515478 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515478 PE), fluorescein (sc-515478 FITC), Alexa Fluor® 488 (sc-515478 AF488), Alexa Fluor® 546 (sc-515478 AF546), Alexa Fluor® 594 (sc-515478 AF594) or Alexa Fluor® 647 (sc-515478 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-515478 AF680) or Alexa Fluor® 790 (sc-515478 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-515478 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

Tak1L (G-8) is recommended for detection of Tak1L of human origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for Tak1L siRNA (h): sc-91477, Tak1L shRNA Plasmid (h): sc-91477-SH and Tak1L shRNA (h) Lentiviral Particles: sc-91477-V.

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

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

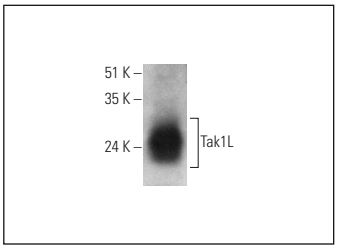
Molecular Weight (observed) of mouse Tak1L: 32/22 kDa.

Positive Controls: human PBL whole cell lysate.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



Tak1L (G-8): sc-515478. Western blot analysis of Tak1L expression in human PBL whole cell lysate.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

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