SANTA CRUZ BIOTECHNOLOGY, INC.

TBC1D4 (H-48): sc-135256

BACKGROUND

TBC1 domain family member 4 (TBC1D4), also designated AS160, can be Insulin- and/or AKT1-induced. Insulin-stimulated phosphorylation is required for Glut4 translocation. TBC1D4 may play a role as a GTPase activating protein for proteins in the Rab family. It is expressed primarily in skeletal muscle and heart, as well as spleen, lymph node and leukocytes. Defects in the TBC1D4 gene may cause atopic dermatitis (AD), sometimes referred to as eczema, an atopic chronic skin disease. The skin of affected individuals reacts to irritants or allergens and becomes red, flaky and itchy. The skin is also more vulnerable to inflammations, and symptoms can grow or disappear over time.

REFERENCES

1. Kane, S., et al. 2002. A method to identify serine kinase substrates. Akt phosphorylates a novel adipocyte protein with a Rab GTPase-activating protein (GAP) domain. J. Biol. Chem. 277: 22115-22118.
2. Sano, H., et al. 2003. Insulin-stimulated phosphorylation of a Rab GTPase-activating protein regulates Glut4 translocation. J. Biol. Chem. 278: 14599-14602.
3. Bruss, M.D., et al. 2004. Increased phosphorylation of Akt substrate of 160 kDa (AS160) in muscle in response to Insulin or contractile activity. Diabetes 54: 41-50.
4. Zeigerer, A., et al. 2004. Insulin stimulation of Glut4 exocytosis, but not its inhibition of endocytosis, is dependent on Rab GAP AS160. Mol. Biol. Cell 15: 4406-4415.
5. Matsumoto, Y., et al. 2004. Upregulation of the transcript level of GTPase activating protein KIAA0603 in T cells from patients with atopic dermatitis. FEBS Lett. 572: 135-140.
6. Beausoleil, S.A., et al. 2004. Large-scale characterization of HeLa cell nuclear phosphoproteins. Proc. Nat. Acad. Sci. USA 101: 12130-12135.

CHROMOSOMAL LOCATION

Genetic locus: TBC1D4 (human) mapping to 13q22.2; Tbc1d4 (mouse) mapping to 14 E2.3.

SOURCE

TBC1D4 (H-48) is a rabbit polyclonal antibody raised against amino acids 879-926 mapping within an internal region of TBC1D4 of human origin.

PRODUCT

Each vial contains 200 µg 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.

RESEARCH USE

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

APPLICATIONS

TBC1D4 (H-48) is recommended for detection of TBC1D4 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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).

TBC1D4 (H-48) is also recommended for detection of TBC1D4 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for TBC1D4 siRNA (h): sc-61654, TBC1D4 siRNA (m): sc-61655, TBC1D4 shRNA Plasmid (h): sc-61654-SH, TBC1D4 shRNA Plasmid (m): sc-61655-SH, TBC1D4 shRNA (h) Lentiviral Particles: sc-61654-V and TBC1D4 shRNA (m) Lentiviral Particles: sc-61655-V.

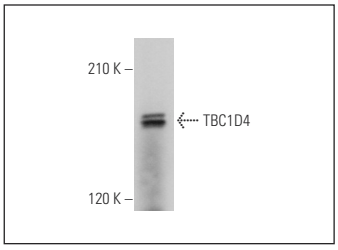
Molecular Weight of TBC1D4: 160 kDa.

Positive Controls: human skeletal muscle extract: sc-363776.

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



TBC1D4 (H-48): sc-135256. Western blot analysis of TBC1D4 expression in human skeletal muscle tissue extract.

PROTOCOLS

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