SANTA CRUZ BIOTECHNOLOGY, INC.

Slac2-a (M-300): sc-33800

BACKGROUND

Slac2-a (synaptotagmin-like protein (Slp) homolog lacking C2 domains-a) links Rab27A on melanosomes with Myosin Va in melanocytes. Slac2-a binds Myosin Va through a C-terminal region and GTP-bound Rab27A through its synaptotagmin-like protein homology domain (SHD) located near the N-terminus. The transport of pigment and cytotoxic granules in melanocytes requires the stable formation of this complex, and thus mutations in the binding domains of the three protein components may cause albinism and/or severe immune disorders.

REFERENCES

1. Fukuda, M., et al. 2002. Slac2-a/Melanophilin, the missing link between Rab27 and Myosin Va: implications of a tripartite protein complex for melanosome transport. J. Biol. Chem. 277: 12432-12436.
2. Fukuda, M. 2002. Synaptotagmin-like protein (Slp) homology domain 1 of Slac2-a/Melanophilin is a critical determinant of GTP-dependent specific binding to Rab27A. J. Biol. Chem. 277: 40118-40124.
3. Fukuda, M., et al. 2002. Slac2-c (synaptotagmin-like protein homologue lacking C2 domains-c), a novel linker protein that interacts with Rab27, Myosin Va/VIIa, and Actin. J. Biol. Chem. 277: 43096-43103.
4. Kuroda, T.S., et al. 2003. The Actin-binding domain of Slac2-a/Melanophilin is required for melanosome distribution in melanocytes. Mol. Cell. Biol. 23: 5245-5255.
5. Fukuda, M. 2003. Distinct Rab binding specificity of Rim1, Rim2, rabphilin, and Noc2. Identification of a critical determinant of Rab3A/Rab27A recognition by Rim2. J. Biol. Chem. 278: 15373-15380.
6. Kuroda, T.S., et al. 2004. Rab27A-binding protein Slp2-a is required for peripheral melanosome distribution and elongated cell shape in melanocytes. Nat. Cell Biol. 6: 1195-1203.

CHROMOSOMAL LOCATION

Genetic locus: MLPH (human) mapping to 2q37.3; Mlph (mouse) mapping to 1 D.

SOURCE

Slac2-a (M-300) is a rabbit polyclonal antibody raised against amino acids 291-590 mapping at the C-terminus of Slp homolog lacking C2 domains-a of mouse 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

Slac2-a (M-300) is recommended for detection of Slac2-a of mouse, rat and, to a lesser extent, 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).

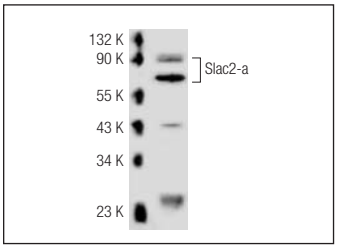
Suitable for use as control antibody for Slac2-a siRNA (m): sc-44755.

Positive Controls: human melanocytes.

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



Slac2-a (M-300): sc-33800. Western blot analysis of Slac2-a expression in mouse brain tissue extract.

PROTOCOLS

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