SANTA CRUZ BIOTECHNOLOGY, INC.

Slac2-a (G-10): sc-515894

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Slac2-a (for 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), which is 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. 2002. The Slp homology domain of synaptotagmin-like proteins 1-4 and Slac2 functions as a novel Rab27A binding domain. J. Biol. Chem. 277: 9212-9218.
5. 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.

CHROMOSOMAL LOCATION

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

SOURCE

Slac2-a (G-10) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 483-504 near the C-terminus of Slac2-a of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Slac2-a (G-10) is available conjugated to agarose (sc-515894 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-515894 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515894 PE), fluorescein (sc-515894 FITC), Alexa Fluor® 488 (sc-515894 AF488), Alexa Fluor® 546 (sc-515894 AF546), Alexa Fluor® 594 (sc-515894 AF594) or Alexa Fluor® 647 (sc-515894 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-515894 AF680) or Alexa Fluor® 790 (sc-515894 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

Slac2-a (G-10) is recommended for detection of Slac2-a of mouse, rat and 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).

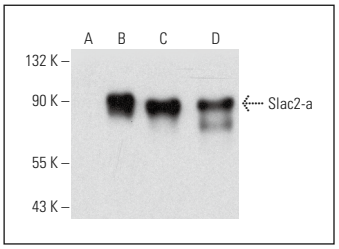
Suitable for use as control antibody for Slac2-a siRNA (h): sc-44754, Slac2-a siRNA (m): sc-44755, Slac2-a shRNA Plasmid (h): sc-44754-SH, Slac2-a shRNA Plasmid (m): sc-44755-SH, Slac2-a shRNA (h) Lentiviral Particles: sc-44754-V and Slac2-a shRNA (m) Lentiviral Particles: sc-44755-V.

Positive Controls: SK-BR-3 cell lysate: sc-2218, SK-MEL-28 cell lysate: sc-2236 or Slac2-a (h): 293T Lysate: sc-372999.

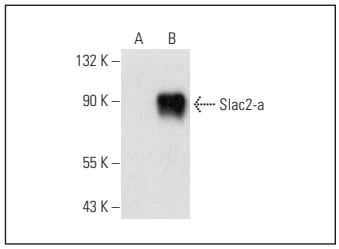
RECOMMENDED SUPPORT REAGENTS

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



Slac2-a (G-10): sc-515894. Western blot analysis of Slac2-a expression in non-transfected 293T: sc-117752 (**A**), human Slac2-a transfected 293T: sc-372999 (**B**), SK-BR-3 (**C**) and SK-MEL-28 (**D**) whole cell lysates.



Slac2-a (G-10): sc-515894. Western blot analysis of Slac2-a expression in non-transfected: sc-117752 (**A**) and human Slac2-a transfected: sc-372999 (**B**) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Chen, X., et al. 2022. Suppression of PD-L1 release from small extracellular vesicles promotes systemic anti-tumor immunity by targeting ORAI1 calcium channels. J. Extracell. Vesicles 11: e12279.

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.