

Slac2-a (C-3): sc-365735

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. 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.
2. 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.
3. 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.
4. 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.
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.
6. 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.

CHROMOSOMAL LOCATION

Genetic locus: Mlph (mouse) mapping to 1 D.

SOURCE

Slac2-a (C-3) is a mouse monoclonal antibody raised against amino acids 291-590 mapping at the C-terminus of Slp homologue lacking C2 domains-a of mouse origin.

PRODUCT

Each vial contains 200 µg IgG₁ lambda light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Slac2-a (C-3) is available conjugated to agarose (sc-365735 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-365735 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365735 PE), fluorescein (sc-365735 FITC), Alexa Fluor® 488 (sc-365735 AF488), Alexa Fluor® 546 (sc-365735 AF546), Alexa Fluor® 594 (sc-365735 AF594) or Alexa Fluor® 647 (sc-365735 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-365735 AF680) or Alexa Fluor® 790 (sc-365735 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

Slac2-a (C-3) is recommended for detection of Slac2-a of mouse 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).

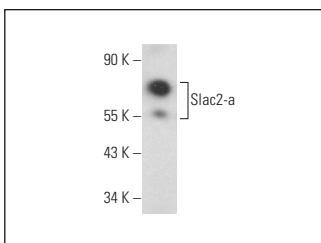
Suitable for use as control antibody for Slac2-a siRNA (m): sc-44755, Slac2-a shRNA Plasmid (m): sc-44755-SH and Slac2-a shRNA (m) Lentiviral Particles: sc-44755-V.

Positive Controls: mouse brain extract: sc-2253, Neuro-2A whole cell lysate: sc-364185 or EOC 20 whole cell lysate: sc-364187.

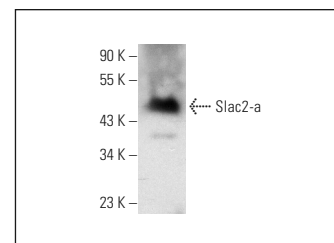
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGλ BP-HRP: sc-516132 or m-IgGλ BP-HRP (Cruz Marker): sc-516132-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-IgGλ BP-FITC: sc-516185 or m-IgGλ BP-PE: sc-516186 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



Slac2-a (C-3): sc-365735. Western blot analysis of Slac2-a expression in Neuro-2A whole cell lysate. Detection reagent used: m-IgGλ BP-HRP (Cruz Marker): sc-516132-CM.



Slac2-a (C-3): sc-365735. Western blot analysis of Slac2-a expression in EOC 20 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Lv, J., et al. 2020. Protoporphyrin IX stimulates melanogenesis, melanocyte dendricity, and melanosome transport through the cGMP/PKG pathway. *Front. Pharmacol.* 11: 569368.

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.

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