SANTA CRUZ BIOTECHNOLOGY, INC.

Lsc (F-3): sc-374533

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The Ras superfamily of GTPases can be subdivided into the Ras, Rho/Rac, Sar, Rab, Arf and Ran subfamilies and controls multiple aspects of cell function, including cytoskeletal rearrangement, nuclear signaling, and cell growth. The Ras superfamily of GTPases function as regulated switches that toggle between a biologically active GTP-bound and an inactive GDP-bound form. This activation is catalyzed by guanine nucleotide exchange factors (GEFs). The Dbl-related proteins are a large family of structurally related molecules that have a common ability to catalyze GEF activity for specific members of the Ras family. Dbl-related proteins include FGD1, RhoGEF p115/Lsc, Lfc, Lbc and Brx. RhoGEF p115/Lsc, Lbc and Lfc share sequence homology and show exchange activity toward Rho family GTPases. RhoGEF p115 (the human homolog of Lsc) catalyzes GEF activity for Rho but not Rac, Cdc42 or Ras GTPases.

REFERENCES

1. Bourne, H.R., et al. 1990. The GTPase superfamily: a conserved switch for diverse cell functions. Nature 348: 125-132.
2. Boguski, M.S., et al. 1993. Proteins regulating Ras and its relatives. Nature 366: 643-654.
3. Whitehead, I.P., et al. 1996. Expression cloning of Lsc, a novel oncogene with structural similarities to the Dbl family of guanine nucleotide exchange factors. J. Biol. Chem. 271: 18643-18650.
4. Hart, M.J., et al. 1996. Identification of a novel guanine nucleotide exchange factor for the Rho GTPase. J. Biol. Chem. 271: 25452-25458.

CHROMOSOMAL LOCATION

Genetic locus: Arhgef1 (mouse) mapping to 7 A3.

SOURCE

Lsc (F-3) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 893-920 at the C-terminus of Lsc of mouse 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.

Lsc (F-3) is available conjugated to agarose (sc-374533 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-374533 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-374533 PE), fluorescein (sc-374533 FITC), Alexa Fluor® 488 (sc-374533 AF488), Alexa Fluor® 546 (sc-374533 AF546), Alexa Fluor® 594 (sc-374533 AF594) or Alexa Fluor® 647 (sc-374533 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-374533 AF680) or Alexa Fluor® 790 (sc-374533 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-374533 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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APPLICATIONS

Lsc (F-3) is recommended for detection of Lsc of mouse and rat 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), immunohistochemistry (including paraffin-embedded sections) (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 Lsc siRNA (m): sc-41725, Lsc shRNA Plasmid (m): sc-41725-SH and Lsc shRNA (m) Lentiviral Particles: sc-41725-V.

Molecular Weight (predicted) of Lsc: 115 kDa.

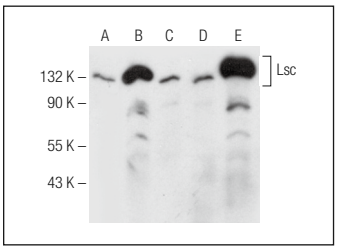
Molecular Weight (observed) of Lsc: 132 kDa.

Positive Controls: TK-1 whole cell lysate: sc-364798, M1 whole cell lysate or MM-142 cell lysate: sc-2246.

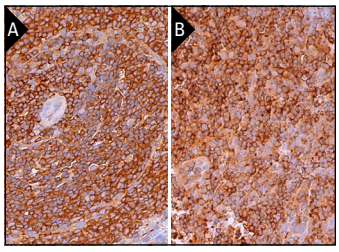
RECOMMENDED SUPPORT REAGENTS

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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



Lsc (F-3): sc-374533. Western blot analysis of Lsc expression in MCP-5 (**A**), M1 (**B**), WEHI-231 (**C**), LADMAC (**D**), TK-1 (**E**) and MM-142 (**F**) whole cell lysates.



Lsc (F-3): sc-374533. Immunoperoxidase staining of formalin fixed, paraffin-embedded rat spleen tissue showing cytoplasmic and membrane staining of cells in white pulp and cells in red pulp (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded mouse lymph node tissue showing cytoplasmic and membrane staining of cells in non-germinal center (**B**).

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.