SANTA CRUZ BIOTECHNOLOGY, INC.

RhoGEF p115/Lsc (H-165): sc-20804

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.

CHROMOSOMAL LOCATION

Genetic locus: ARHGEF1 (human) mapping to 19q13.2; Arhgef1 (mouse) mapping to 7 A3.

SOURCE

RhoGEF p115/Lsc (H-165) is a rabbit polyclonal antibody raised against amino acids 748-912 mapping at the C-terminus of RhoGEF p115 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.

APPLICATIONS

RhoGEF p115/Lsc (H-165) is recommended for detection of RhoGEF p115 of human origin and Lsc of mouse and rat 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), 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 RhoGEF p115 siRNA (h): sc-41734, Lsc siRNA (m): sc-41725, RhoGEF p115 shRNA Plasmid (h): sc-41734-SH, Lsc shRNA Plasmid (m): sc-41725-SH, RhoGEF p115 shRNA (h) Lentiviral Particles: sc-41734-V and Lsc shRNA (m) Lentiviral Particles: sc-41725-V.

Molecular Weight of RhoGEF p115/Lsc: 115 kDa.

Positive Controls: RhoGEF p115 (h3): 293T Lysate: sc-175428, HeLa whole cell lysate: sc-2200 or Jurkat whole cell lysate: sc-2204.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

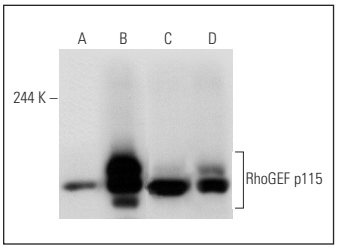
RESEARCH USE

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

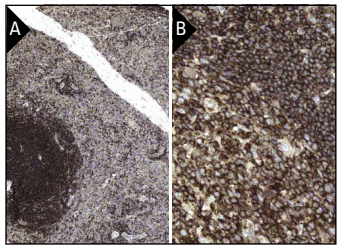
RECOMMENDED SECONDARY REAGENTS

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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



RhoGEF p115/Lsc (H-165): sc-20804. Western blot analysis of RhoGEF p115 expression in non-transfected 293T: sc-117752 (**A**), human RhoGEF p115 transfected 293T: sc-175428 (**B**), K-562 (**C**) and Jurkat (**D**) whole cell lysates.



RhoGEF p115/Lsc (H-165): sc-20804. Immunoperoxidase staining of formalin fixed, paraffin-embedded human spleen tissue showing membrane and cytoplasmic staining of cells in white and red pulps at low (**A**) and high (**B**) magnification. Kindly provided by The Swedish Human Protein Atlas (HPA) program.

SELECT PRODUCT CITATIONS

1. Zheng, R., et al. 2006. Neuropeptide-stimulated cell migration in prostate cancer cells is mediated by RhoA kinase signaling and inhibited by neutral endopeptidase. Oncogene 25: 5942-5952.
2. Handa, Y., et al. 2007. *Shigella* IpgB1 promotes bacterial entry through the ELMO-Dock180 machinery. Nat. Cell Biol. 9: 121-128.
3. O'Brien, M., et al. 2008. Expression of RHOGTPase regulators in human myometrium. Reprod. Biol. Endocrinol. 6: 1.
4. Tsuji, T., et al. 2010. Involvement of p114-RhoGEF and Lfc in Wnt-3a- and dishevelled-induced RhoA activation and neurite retraction in N1E-115 mouse neuroblastoma cells. Mol. Biol. Cell 21: 3590-3600.
5. Mikelis, C.M., et al. 2013. PDZ-RhoGEF and LARG are essential for embryonic development and provide a link between thrombin and LPA receptors and Rho activation. J. Biol. Chem. 288: 12232-12243.