

RhoGEF p115 (C-9): sc-74565

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.

SOURCE

RhoGEF p115 (C-9) is a mouse monoclonal 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_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

RhoGEF p115 (C-9) is available conjugated to agarose (sc-74565 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-74565 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-74565 PE), fluorescein (sc-74565 FITC), Alexa Fluor® 488 (sc-74565 AF488), Alexa Fluor® 546 (sc-74565 AF546), Alexa Fluor® 594 (sc-74565 AF594) or Alexa Fluor® 647 (sc-74565 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-74565 AF680) or Alexa Fluor® 790 (sc-74565 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

RhoGEF p115 (C-9) is recommended for detection of RhoGEF p115 of 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), 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, RhoGEF p115 shRNA Plasmid (h): sc-41734-SH and RhoGEF p115 shRNA (h) Lentiviral Particles: sc-41734-V.

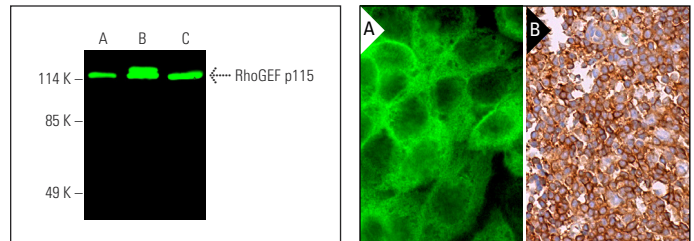
Molecular Weight of RhoGEF p115: 115 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, HeLa whole cell lysate: sc-2200 or K-562 whole cell lysate: sc-2203.

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



RhoGEF p115 (C-9): sc-74565. Near-infrared western blot analysis of RhoGEF p115 expression in HeLa (A), Jurkat (B) and K-562 (C) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgGκ BP-CFL 680: sc-516180.

RhoGEF p115 (C-9): sc-74565. Immunofluorescence staining of formalin-fixed A-431 cells showing cytoplasmic and membrane localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human lymph node tissue showing cytoplasmic and membrane staining of cells in germinal center and cells in non-germinal center (B).

SELECT PRODUCT CITATIONS

- Singh, N.K., et al. 2017. p115 RhoGEF activates the Rac1 GTPase signaling cascade in MCP1 chemokine-induced vascular smooth muscle cell migration and proliferation. *J. Biol. Chem.* 292: 14080-14091.
- Zhang, J.Z., et al. 2020. Histamine-induced biphasic activation of RhoA allows for persistent RhoA signaling. *PLoS Biol.* 18: e3000866.

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.

PROTOCOLS

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