SANTA CRUZ BIOTECHNOLOGY, INC.

RhoGEF p115 (YN-12): sc-81901

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, Lsc, RhoGEF p115, Lfc, Lbc and Brx. Lsc, Lbc and Lfc share sequence homology and show exchange activity toward Rho family GTPases. RhoGEF p115 catalyzes GEF activity for Rho but not Rac, Cdc42 or Ras GTPases.

REFERENCES

1. Bourne, H.R., Sanders, D.A. and McCormick, F. 1990. The GTPase superfamily: a conserved switch for diverse cell functions. Nature 348: 125-132.
2. Boguski, M.S. and McCormick, F. 1993. Proteins regulating Ras and its relatives. Nature 366: 643-654.
3. Cerione, R.A. and Zheng, Y. 1996. The Dbl family of oncogenes. Curr. Opin. Cell. Biol. 8: 216-222.
4. Whitehead, I.P., Campbell, S., Rossman, K.L. and Der, C.J. 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.
5. Hart, M.J., Sharma, S., elMasry, N., Qiu, R.G., McCabe, P., Polakis, P. and Bollag, G. 1996. Identification of a novel guanine nucleotide exchange factor for the Rho GTPase. J. Biol. Chem. 271: 25452-25458.
6. Whitehead, I.P., Campbell, S., Rossman, K.L. and Der, C.J. 1997. Dbl family proteins. Biochim. Biophys. Acta 1332: F1-F23.
7. Zohn, I.M., Campbell, S.L., Khosravi-Far, R., Rossman, K.L. and Der, C.J. 1998. Rho family proteins and Ras transformation: the RHOad less traveled gets congested. Oncogene 17: 1415-1438.

CHROMOSOMAL LOCATION

Genetic locus: ARHGEF1 (human) mapping to 19q13.13.

SOURCE

RhoGEF p115 (YN-12) is a mouse monoclonal antibody raised against recombinant RhoGEF p115 of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

RhoGEF p115 (YN-12) is recommended for detection of RhoGEF p115 of human 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)] 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; and as shRNA Plasmid control antibody for RhoGEF p115 shRNA Plasmid (h): sc-41734-SH.

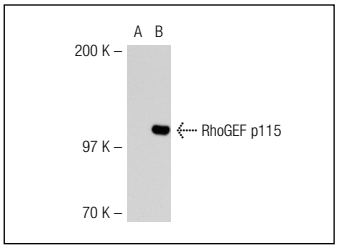
Molecular Weight of RhoGEF p115: 115 kDa.

Positive Controls: RhoGEF p115 (h): 293T Lysate: sc-113634, K-562 whole cell lysate: sc-2203 or Jurkat whole cell lysate: sc-2204.

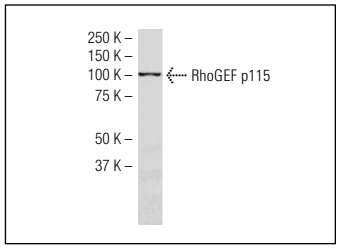
RECOMMENDED SUPPORT REAGENTS

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, 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).

DATA



RhoGEF p115 (YN-12): sc-81901. Western blot analysis of RhoGEF p115 expression in non-transfected: sc-117752 (**A**) and human RhoGEF p115 transfected: sc-113634 (**B**) 293T whole cell lysates.



RhoGEF p115 (YN-12): sc-81901. Western blot analysis of RhoGEF p115 expression in K-562 whole cell lysate.

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.