

# LARG (H-70): sc-25638

## BACKGROUND

Leukemia-associated RhoGEF (LARG) is a 1,544 amino acid, guanine nucleotide exchange factor (GEF) that contains a PDZ domain, a LH/RGS domain and a Dbl homology/Pleckstrin homology domain. LARG shares homology with other RhoGEFs, including such oncogenes as DBL, VAV1, TIAM and BCR. RhoGEFs containing RGS domains are capable of associating with activated G $\alpha$  subunits, and can function as GTPase activating proteins (GAPs). LARG transcripts have been detected in human peripheral blood leukocytes, spleen, prostate, testis, ovary, small intestine, colon and thymus. The LARG protein may elicit signals through a G protein-coupled receptor (GPCR)-Rho-dependent signaling pathway. Genetic alterations that occur at human chromosome position 11q23.3, where LARG maps, are prevalent in acute leukemias.

## REFERENCES

1. Nagase, T., et al. 1997. Prediction of the coding sequences of unidentified human genes. VII. The complete sequences of 100 new cDNA clones from brain which can code for large proteins *in vitro*. DNA Res. 4: 141-150.
2. Fukuhara, S., et al. 2000. Leukemia-associated Rho guanine nucleotide exchange factor (LARG) links heterotrimeric G proteins of the G<sub>12</sub> family to Rho. FEBS Lett. 485: 183-188.

## CHROMOSOMAL LOCATION

Genetic locus: ARHGGEF12 (human) mapping to 11q23.3; Arhgef12 (mouse) mapping to 9 A5.1.

## SOURCE

LARG (H-70) is a rabbit polyclonal antibody raised against amino acids 1-70 of LARG of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

LARG (H-70) is recommended for detection of LARG of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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).

LARG (H-70) is also recommended for detection of LARG in additional species, including bovine.

Suitable for use as control antibody for LARG siRNA (h): sc-41800, LARG siRNA (m): sc-41801, LARG shRNA Plasmid (h): sc-41800-SH, LARG shRNA Plasmid (m): sc-41801-SH, LARG shRNA (h) Lentiviral Particles: sc-41800-V and LARG shRNA (m) Lentiviral Particles: sc-41801-V.

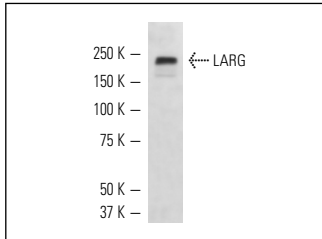
Molecular Weight of LARG: 220 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200 or HL-60 whole cell lysate: sc-2209.

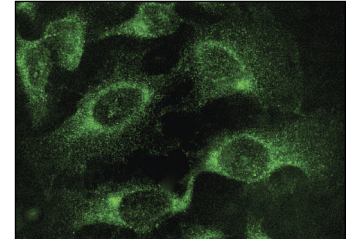
## STORAGE

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

## DATA



LARG (H-70): sc-25638. Western blot analysis of LARG expression in HeLa whole cell lysate.



LARG (H-70): sc-25638. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

## SELECT PRODUCT CITATIONS

1. Appert-Collin, A., et al. 2007. The A-kinase anchoring protein (AKAP)-Lbc-signaling complex mediates  $\alpha$ 1 adrenergic receptor-induced cardiomyocyte hypertrophy. Proc. Natl. Acad. Sci. USA 104: 10140-10145.
2. O'Brien, M., et al. 2008. Expression of Rho GTPase regulators in human myometrium. Reprod. Biol. Endocrinol. 6: 1.
3. Wang, D., et al. 2009. A role for Gab 1/SHP2 in thrombin activation of PAK1: gene transfer of kinase-dead PAK1 inhibits injury-induced restenosis. Circ. Res. 104: 1066-1075.
4. Gringhuis, S.I., et al. 2009. Carbohydrate-specific signaling through the DC-SIGN signalosome tailors immunity to *Mycobacterium tuberculosis*, HIV-1 and *Helicobacter pylori*. Nat. Immunol. 10: 1081-1088.
5. Jiang, X., et al. 2010. HGAL, a germinal center specific protein, decreases lymphoma cell motility by modulation of the RhoA signaling pathway. Blood 116: 5217-5227.
6. 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.
7. 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.

## RESEARCH USE

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



Try **LARG (H-3): sc-166318**, our highly recommended monoclonal alternative to LARG (H-70).