

ARHGAP15 (P-15): sc-160965

BACKGROUND

GTPase-activating proteins (GAPs) accelerate the intrinsic rate of GTP hydrolysis of Ras-related proteins, resulting in downregulation of their active form. ARHGAP15 (Rho GTPase activating protein 15) is a 475 amino acid peripheral membrane protein that contains one C-terminal Rho-GAP domain, which is highly similar to GAP domains of both ARHGAP9 and ARHGAP12, and one N-terminal pleckstrin homology (PH) domain, which is required for membrane localization. ARHGAP15 also localizes to cytoplasm and is expressed in lung, liver and lymphoid cells. Overexpression of ARHGAP15 results in an increase of actin stress fibers and in cell contraction. Conserved in chimpanzee, canine, bovine, mouse, rat, chicken and zebrafish, ARHGAP15 functions as a GTPase activator for Rho-type GTPases by converting them to an inactive GDP-bound state. ARHGAP15 also exhibits specificity toward Rac 1 *in vitro*. HeLa cells expressing ARHGAP15 are resistant to phorbol ester treatment, suggesting that ARHGAP15 is also a regulator of Rac 1.

REFERENCES

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- Lavelin, I., et al. 2005. Characterization of a novel GTPase-activating protein associated with focal adhesions and the actin cytoskeleton. *J. Biol. Chem.* 280: 7178-7185.
- Kandpal, R.P. 2006. Rho GTPase activating proteins in cancer phenotypes. *Curr. Protein Pept. Sci.* 7: 355-365.
- Liu, X.L., et al. 2007. Differential gene expression in human hematopoietic stem cells specified toward erythroid, megakaryocytic, and granulocytic lineage. *J. Leukoc. Biol.* 82: 986-1002.
- Costa, C., et al. 2007. Negative feedback regulation of Rac in leukocytes from mice expressing a constitutively active phosphatidylinositol 3-kinase γ . *Proc. Natl. Acad. Sci. USA* 104: 14354-14359.
- Matsuda, M., et al. 2008. Identification of adherens junction-associated GTPase activating proteins by the fluorescence localization-based expression cloning. *Exp. Cell Res.* 314: 939-949.

CHROMOSOMAL LOCATION

Genetic locus: ARHGAP15 (human) mapping to 2q22.2; Arhgap15 (mouse) mapping to 2 B.

SOURCE

ARHGAP15 (P-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of ARHGAP15 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-160965 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

ARHGAP15 (P-15) is recommended for detection of ARHGAP15 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ 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); non cross-reactive with other ARHGAP family members.

ARHGAP15 (P-15) is also recommended for detection of ARHGAP15 in additional species, including equine, canine, bovine and avian.

Suitable for use as control antibody for ARHGAP15 siRNA (h): sc-94966, ARHGAP15 siRNA (m): sc-141203, ARHGAP15 shRNA Plasmid (h): sc-94966-SH, ARHGAP15 shRNA Plasmid (m): sc-141203-SH, ARHGAP15 shRNA (h) Lentiviral Particles: sc-94966-V and ARHGAP15 shRNA (m) Lentiviral Particles: sc-141203-V.

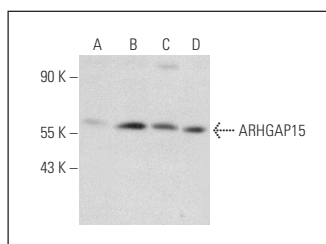
Molecular Weight of ARHGAP15: 55 kDa.

Positive Controls: ARHGAP15 (h): 293T Lysate: sc-115500, HL-60 whole cell lysate: sc-2209 or HEL 92.1.7 cell lysate: sc-2270.

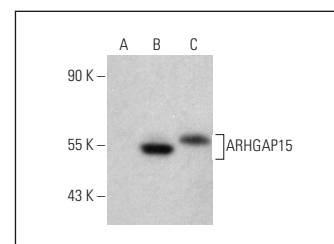
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



ARHGAP15 (P-15): sc-160965. Western blot analysis of ARHGAP15 expression in THP-1 (A), HL-60 (B), HEL 92.1.7 (C) and U-937-M (D) whole cell lysates.



ARHGAP15 (P-15): sc-160965. Western blot analysis of ARHGAP15 expression in non-transfected 293T: sc-117752 (A), human ARHGAP15 transfected 293T: sc-115500 (B) and K-562 (C) whole cell lysates.

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.