

ARHGAP22/24 (H-162): sc-99112

BACKGROUND

GTPase-activating proteins (GAPs) accelerate the intrinsic rate of GTP hydrolysis of Ras-related proteins, resulting in down regulation of their active form. ARHGAP22 (Rho GTPase activating protein 22), also known as RHOGAP2, is a 698 amino acid protein that localizes to the cytoplasm, and contains one Rho-GAP domain and one PH domain. ARHGAP22 functions as a GTPase-activating protein for Rac 1 converting it to an inactive GDP-bound state and, through its interaction with ZNF161 (VEZF1), is thought to be useful in transcription regulation. Multiple isoforms of ARHGAP22 exist due to alternative splicing events. ARHGAP24, also designated p73RhoGAP, RC-GAP72 or FILGAP is a 748 amino acid Rho GTPase activating protein implicated in cell polarity, cell morphology and cytoskeletal organization. ARHGAP24 exhibits differential expression as isoform 1 is widely expressed with highest levels observed in kidney while isoform 2 is primarily expressed in endothelial cells and has been shown to participate in the modulation of angiogenesis. The N-termini of ARHGAP22 and ARHGAP24 share significant amino acid sequence identity.

REFERENCES

1. Katoh, M. and Katoh, M. 2004. Identification and characterization of ARHGAP24 and ARHGAP25 genes *in silico*. *Int. J. Mol. Med.* 14: 333-338.
2. Su, Z.J., Hahn, C.N., Goodall, G.J., Reck, N.M., Leske, A.F., Davy, A., Kremmidiotis, G., Vadas, M.A. and Gamble, J.R. 2004. A vascular cell-restricted RhoGAP, p73RhoGAP, is a key regulator of angiogenesis. *Proc. Natl. Acad. Sci. USA* 101: 12212-12217.
3. Lavelin, I. and Geiger, B. 2005. Characterization of a novel GTPase-activating protein associated with focal adhesions and the actin cytoskeleton. *J. Biol. Chem.* 280: 7178-7185.
4. Ohta, Y., Hartwig, J.H. and Stossel, T.P. 2006. FILGAP, a Rho- and Rock-regulated GAP for Rac binds Filamin A to control actin remodelling. *Nat. Cell Biol.* 8: 803-814.
5. Online Mendelian Inheritance in Man, OMIM™. 2006. Johns Hopkins University, Baltimore, MD. MIM Number: 610585. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

SOURCE

ARHGAP22/24 (H-162) is a rabbit polyclonal antibody raised against amino acids 174-331 mapping within an internal region of ARHGAP22 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.

STORAGE

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

PROTOCOLS

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

APPLICATIONS

ARHGAP22/24 (H-162) is recommended for detection of ARGHAP22, ARHGAP24 and, to a lesser extent, ARHGAP25 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

ARHGAP22/24 (H-162) is also recommended for detection of ARGHAP22, ARHGAP24 and, to a lesser extent, ARHGAP25 in additional species, including equine, canine, bovine and avian.

Molecular Weight of ARHGAP22/24: 77/84 kDa.

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) 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.

RESEARCH USE

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