

# ARHGAP12 (E-16): sc-241836

## BACKGROUND

GTPase-activating proteins (GAPs) accelerate the intrinsic rate of GTP hydrolysis of Ras-related proteins, resulting in downregulation of their active form. ARHGAP12 (Rho GTPase activating protein 12) is a 846 amino acid protein that contains one N-terminal SH3 domain, two WW domains, one PH (pleckstrin homology) domain and one C-terminal Rho-GAP domain. The GAP domain of ARHGAP12 is most closely related to the GAP domain of ARHGAP9. ARHGAP12 functions as a GTPase activator for Rho-type GTPases by converting them to an inactive GDP-bound state. Conserved in chimpanzee, canine, bovine, mouse, rat, chicken and zebrafish, ARHGAP12 contains 20 exons, the first 2 of which are noncoding and the final contains 2 alternate polyadenylation signals. Encoded by a gene that maps to human chromosome 10p11.22, ARHGAP12 is expressed in lung, kidney, liver, brain and pancreas, and exists as three alternatively spliced isoforms.

## REFERENCES

1. Peck, J., et al. 2002. Human RhoGAP domain-containing proteins: structure, function and evolutionary relationships. *FEBS Lett.* 528: 27-34.
2. Zhang, Z., et al. 2002. Cloning and characterization of ARHGAP12, a novel human rhoGAP gene. *Int. J. Biochem. Cell Biol.* 34: 325-331.
3. Seoh, M.L., et al. 2003. ArhGAP15, a novel human RacGAP protein with GTPase binding property. *FEBS Lett.* 539: 131-137.
4. Sakakibara, T., et al. 2004. Identification and characterization of a novel Rho GTPase activating protein implicated in receptor-mediated endocytosis. *FEBS Lett.* 566: 294-300.
5. Kosoy, R., et al. 2004. Polymorphic variation in the CBLB gene in human type 1 diabetes. *Genes Immun.* 5: 232-235.
6. Katoh, Y., et al. 2004. Identification and characterization of ARHGAP27 gene in silico. *Int. J. Mol. Med.* 14: 943-947.
7. Hougs, L., et al. 2005. One third of Danish hypertrophic cardiomyopathy patients with MYH7 mutations have mutations in MYH7 rod region. *Eur. J. Hum. Genet.* 13: 161-165.
8. Gentile, A., et al. 2008. Met-driven invasive growth involves transcriptional regulation of Arhgap12. *Oncogene* 27: 5590-5598.

## CHROMOSOMAL LOCATION

Genetic locus: ARHGAP12 (human) mapping to 10p11.22; Arhgap12 (mouse) mapping to 18 A1.

## SOURCE

ARHGAP12 (E-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of ARHGAP12 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.

Blocking peptide available for competition studies, sc-241836 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

ARHGAP12 (E-16) is recommended for detection of ARHGAP12 of mouse, rat and 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)], 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.

ARHGAP12 (E-16) is also recommended for detection of ARHGAP12 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for ARHGAP12 siRNA (h): sc-90343, ARHGAP12 siRNA (m): sc-141202, ARHGAP12 shRNA Plasmid (h): sc-90343-SH, ARHGAP12 shRNA Plasmid (m): sc-141202-SH, ARHGAP12 shRNA (h) Lentiviral Particles: sc-90343-V and ARHGAP12 shRNA (m) Lentiviral Particles: sc-141202-V.

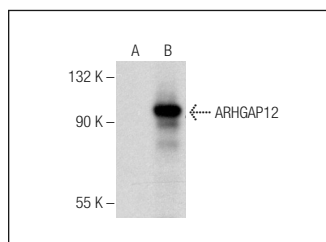
Molecular Weight of ARHGAP12: 97 kDa.

Positive Controls: ARHGAP12 (m2): 293T Lysate: sc-118527.

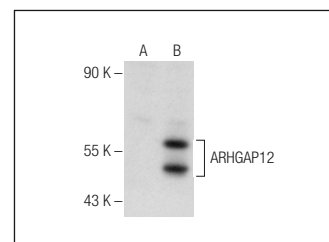
## RECOMMENDED SECONDARY REAGENTS

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



ARHGAP12 (E-16): sc-241836. Western blot analysis of ARHGAP12 expression in non-transfected: sc-117752 (A) and mouse ARHGAP12 transfected: sc-118527 (B) 293T whole cell lysates.



ARHGAP12 (E-16): sc-241836. Western blot analysis of ARHGAP12 expression in non-transfected: sc-117752 (A) and mouse ARHGAP12 transfected: sc-118526 (B) 293T 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.