

# ARAP1 (C-16): sc-47796

## BACKGROUND

ARAP1 (ARFGAP, Rho GAP, ankyrin repeat and pleckstrin homology domains-containing protein 1), also designated centaurin  $\delta 2$  (CENTD2), contains ARF-GAP, Rho GAP, ankyrin repeat, RAS-associating and pleckstrin homology domains. ARAP1 displays Rho GAP and phosphatidylinositol (3,4,5) trisphosphate (PIP3)-dependent ARFGAP activity. It associates with the Golgi, and the ARFGAP activity mediates changes in the Golgi and the formation of filopodia. The Rho GAP activity may mediate cell rounding and loss of stress fibers. At least three transcript variants encoding different isoforms have been found for this gene. ARAP1 can associate with G protein receptor angiotensin 1 (AT1) and influences recycling of the AT1 receptor to the plasma membrane. ARAP1 transcript levels are abundant in ovary, lung, liver and kidney. Northern blots indicate a ubiquitous 5.5 kb ARAP1 transcript and an additional 7 kb transcript present in heart and skeletal muscle.

## REFERENCES

1. Nagase, T., et al. 1998. Prediction of the coding sequences of unidentified human genes. XI. The complete sequences of 100 new cDNA clones from brain which code for large proteins *in vitro*. DNA Res. 5: 277-286.
2. Jacques, K.M., et al. 2002. ARF1 dissociates from the clathrin adaptor GGA prior to being inactivated by ARF GTPase-activating proteins. J. Biol. Chem. 277: 47235-47241.
3. Miura, K., et al. 2002. ARAP1: a point of convergence for ARF and Rho signaling. Mol. Cell 9: 109-119.
4. Santy, L.C., et al. 2002. GTPase signaling: bridging the GAP between ARF and Rho. Curr. Biol. 12: R360-R362.
5. Guo, D.F., et al. 2003. Type 1 angiotensin II receptor-associated protein ARAP1 binds and recycles the receptor to the plasma membrane. Biochem. Biophys. Res. Commun. 310: 1254-1265.
6. Guo, D.F., et al. 2006. Development of hypertension and kidney hypertrophy in transgenic mice overexpressing ARAP1 gene in the kidney. Hypertension 48: 453-459.

## CHROMOSOMAL LOCATION

Genetic locus: CENTD2 (human) mapping to 11q13.4; Centd2 (mouse) mapping to 7 E3.

## SOURCE

ARAP1 (C-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of ARAP1 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.

Blocking peptide available for competition studies, sc-47796 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## RESEARCH USE

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

## APPLICATIONS

ARAP1 (C-16) is recommended for detection of ARAP1 of mouse 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).

ARAP1 (C-16) is also recommended for detection of ARAP1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for ARAP1 siRNA (h): sc-44444, ARAP1 siRNA (m): sc-45742, ARAP1 shRNA Plasmid (h): sc-44444-SH, ARAP1 shRNA Plasmid (m): sc-45742-SH, ARAP1 shRNA (h) Lentiviral Particles: sc-44444-V and ARAP1 shRNA (m) Lentiviral Particles: sc-45742-V.

Molecular Weight of ARAP1: 136 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203.

## 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) 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.

## 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](http://www.scbt.com) or our catalog for detailed protocols and support products.



Try **ARAP1 (A-3): sc-393138**, our highly recommended monoclonal alternative to ARAP1 (C-16).