

IQGAP1 (F-7): sc-376383

BACKGROUND

IQGAP1, for IQ motif containing GTPase activating protein, is a Ras GAP-related, Actin-binding protein that interacts with the small GTPases Cdc42 and Rac1. The C-terminus of IQGAP1 is essential for interacting with Cdc42 and, in addition, IQGAP1 contains a WW domain and a predicted N-terminal coiled-coil region, which may be involved in IQGAP dimerization. Expression of IQGAP1 is highest in placenta, lung and kidney, where it co-localizes with Cdc42 to the cytoskeleton and assists with Cdc42 in mediating the regulation of cell proliferation, polarity and cell morphology. IQGAP1 regulates cadherin-mediated cell adhesion via binding to E-cadherin, β -catenin and α -catenin. This association induces the accumulation of these proteins at the site of cell-cell contact. IQGAP1 is negatively regulated by calmodulin, which binds to IQGAP1 in a calcium-dependent manner and disrupts IQGAP1 from associating with Cdc42.

REFERENCES

- Weissbach, L., et al. 1994. Identification of a human Ras GAP-related protein containing calmodulin-binding motifs. *J. Biol. Chem.* 269: 20517-20521.
- Kuroda, S., et al. 1996. Identification of IQGAP as a putative target for the small GTPases, Cdc42, and Rac 1. *J. Biol. Chem.* 271: 23363-23367.

CHROMOSOMAL LOCATION

Genetic locus: IQGAP1 (human) mapping to 15q26.1; *lqgap1* (mouse) mapping to 7 D3.

SOURCE

IQGAP1 (F-7) is a mouse monoclonal antibody raised against amino acids 314-422 mapping near the N-terminus of IQGAP1 of human origin.

PRODUCT

Each vial contains 200 μ g IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

IQGAP1 (F-7) is recommended for detection of IQGAP1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for IQGAP1 siRNA (h): sc-35700, IQGAP1 siRNA (m): sc-35701, IQGAP1 shRNA Plasmid (h): sc-35700-SH, IQGAP1 shRNA Plasmid (m): sc-35701-SH, IQGAP1 shRNA (h) Lentiviral Particles: sc-35700-V and IQGAP1 shRNA (m) Lentiviral Particles: sc-35701-V.

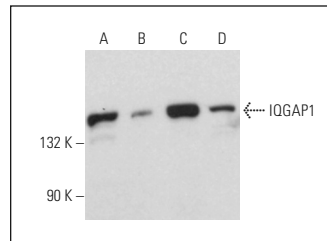
Molecular Weight of IQGAP1: 190 kDa.

Positive Controls: BJAB whole cell lysate: sc-2207, NIH/3T3 whole cell lysate: sc-2210 or RAW 264.7 whole cell lysate: sc-2211.

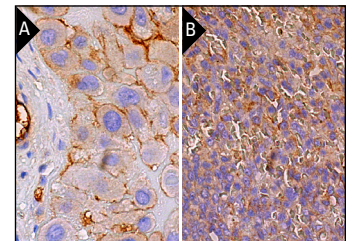
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgG κ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



IQGAP1 (F-7): sc-376383. Western blot analysis of IQGAP1 expression in RAW 264.7 (A), SP2/O (B), NIH/3T3 (C) and BJAB (D) whole cell lysates.



IQGAP1 (F-7): sc-376383. Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing membrane staining of decidual cells (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human spleen tissue showing membrane and cytoplasmic staining of cells in red pulp (B).

SELECT PRODUCT CITATIONS

- Daubon, T., et al. 2016. VEGF-A stimulates podosome-mediated collagen-IV proteolysis in microvascular endothelial cells. *J. Cell Sci.* 129: 2586-2598.

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.

PROTOCOLS

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



See **IQGAP1 (C-9): sc-376021** for IQGAP1 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.