SANTA CRUZ BIOTECHNOLOGY, INC.

IQGAP2 (A-4): sc-17835

The Power to Question

BACKGROUND

IQGAP1 and IQGAP2 are RasGAP-related Actin binding proteins that interact with the small GTPases Cdc42 and Rac1 and regulate cadherin-mediated cell-cell adhesion. IQGAP1 and IQGAP2 share largely related sequence similarity, and both contain a putative calponin domain, a single WW domain, four conserved IQ or calmodulin-binding domains and a RasGAP domain. IQGAP1 binds preferentially to the GTP S-bound form of Cdc42, whereas IQGAP2 associates with both nucleotide-bound and nucleotide-free forms of Cdc42. In addition to binding Cdc42, IQGAP1 and IQGAP2 also bind Rac1, F-Actin and calmodulin. The binding of IQGAP proteins to Cdc42 and Rac1 inhibits their intrinsic and RhoGAP-stimulated GTPase activities, which thereby maintains Cdc42 and Rac1 in their active GTP-bound state.

CHROMOSOMAL LOCATION

Genetic locus: IQGAP2 (human) mapping to 5q13.3; Iqgap2 (mouse) mapping to 13 D1.

SOURCE

IQGAP2 (A-4) is a mouse monoclonal antibody raised against amino acids 519-727 mapping to an internal region of IQGAP2 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

IQGAP2 (A-4) is available conjugated to agarose (sc-17835 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-17835 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-17835 PE), fluorescein (sc-17835 FITC), Alexa Fluor® 488 (sc-17835 AF488), Alexa Fluor® 546 (sc-17835 AF546), Alexa Fluor® 594 (sc-17835 AF594) or Alexa Fluor® 647 (sc-17835 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-17835 AF680) or Alexa Fluor® 790 (sc-17835 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

IQGAP2 (A-4) is recommended for detection of IQGAP2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:500), 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), 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 IQGAP2 siRNA (h): sc-35702, IQGAP2 siRNA (m): sc-72112, IQGAP2 shRNA Plasmid (h): sc-35702-SH, IQGAP2 shRNA Plasmid (m): sc-72112-SH, IQGAP2 shRNA (h) Lentiviral Particles: sc-35702-V and IQGAP2 shRNA (m) Lentiviral Particles: sc-72112-V.

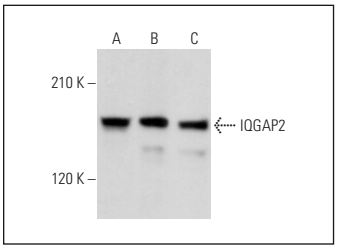
Molecular Weight of IQGAP2: 190 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, MOLT-4 cell lysate: sc-2233 or human liver extract: sc-363766.

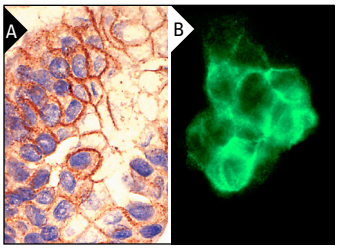
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ 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-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



IQGAP2 (A-4): sc-17835. Western blot analysis of IQGAP2 expression in Hep G2 (**A**) and MOLT-4 (**B**) whole cell lysates and human liver tissue extract (**C**). Detection reagent used: m-IgGκ BP-HRP: sc-516102.



IQGAP2 (A-4): sc-17835. Immunoperoxidase staining of formalin fixed, paraffin-embedded human liver tumor showing cytoskeletal localization (**A**). Immunofluorescence staining of methanol-fixed Hep G2 cells showing membrane and cytoplasmic localization (**B**).

SELECT PRODUCT CITATIONS

1. Tseng, P.C., et al. 2014. An increase in integrin-linked kinase non-canonically confers NFκB-mediated growth advantages to gastric cancer cells by activating ERK1/2. Cell Commun. Signal. 12: 69.
2. Song, F., et al. 2022. Reduced IQGAP2 promotes bladder cancer through regulation of MAPK/ERK pathway and cytokines. Int. J. Mol. Sci. 23: 13508.

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.