

IQGAP3 (H-55): sc-134688

BACKGROUND

IQGAP3 (IQ motif containing GTPase activating protein 3) is a 1,631 amino acid protein that acts as an effector of Cdc42 and Rac 1, linking their activation to the cytoskeleton during neuronal morphogenesis. A novel member of the IQGAP family, IQGAP3 is highly expressed in brain where it localizes to axons of hippocampal neurons. IQGAP3 contains one Ras-GAP domain, a CH (calponin-homology) domain, 4 IQ domains and is encoded by a gene located on human chromosome 1, which spans 260 million base pairs, contains over 3,000 genes and comprises nearly 8% of the human genome. Chromosome 1 houses a large number of disease-associated genes, including those that are involved in familial adenomatous polyposis, Stickler syndrome, Parkinson's disease, Gaucher disease, schizophrenia and Usher syndrome. Aberrations in chromosome 1 are found in a variety of cancers, including head and neck cancer, malignant melanoma and multiple myeloma.

REFERENCES

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2. Lau, E.K., et al. 1999. Two novel polymorphic sequences in the glucocerebrosidase gene region enhance mutational screening and founder effect studies of patients with Gaucher disease. *Hum. Genet.* 104: 293-300.
3. Plasilova, M., et al. 2004. Exclusion of an extracolonic disease modifier locus on chromosome 1p33-36 in a large Swiss familial adenomatous polyposis kindred. *Eur. J. Hum. Genet.* 12: 365-371.
4. Oliveira, S.A., et al. 2005. Identification of risk and age-at-onset genes on chromosome 1p in Parkinson disease. *Am. J. Hum. Genet.* 77: 252-264.
5. Wang, S., et al. 2007. IQGAP3, a novel effector of Rac1 and Cdc42, regulates neurite outgrowth. *J. Cell Sci.* 120: 567-577.
6. Yurov, Y.B., et al. 2008. The schizophrenia brain exhibits low-level aneuploidy involving chromosome 1. *Schizophr. Res.* 98: 139-147.
7. Balcárková, J., et al. 2009. Gain of chromosome arm 1q in patients in relapse and progression of multiple myeloma. *Cancer Genet. Cytogenet.* 192: 68-72.
8. Yokoi, T., et al. 2009. Analysis of the vitreous membrane in a case of type 1 Stickler syndrome. *Graefes Arch. Clin. Exp. Ophthalmol.* 247: 715-718.

CHROMOSOMAL LOCATION

Genetic locus: IQGAP3 (human) mapping to 1q22; Iqgap3 (mouse) mapping to 3 F1.

SOURCE

IQGAP3 (H-55) is a rabbit polyclonal antibody raised against amino acids 538-592 mapping within an internal region of IQGAP3 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.

APPLICATIONS

IQGAP3 (H-55) is recommended for detection of IQGAP3 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 IQGAP1 or IQGAP2.

IQGAP3 (H-55) is also recommended for detection of IQGAP3 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for IQGAP3 siRNA (h): sc-78744, IQGAP3 siRNA (m): sc-146276, IQGAP3 shRNA Plasmid (h): sc-78744-SH, IQGAP3 shRNA Plasmid (m): sc-146276-SH, IQGAP3 shRNA (h) Lentiviral Particles: sc-78744-V and IQGAP3 shRNA (m) Lentiviral Particles: sc-146276-V.

Molecular Weight of IQGAP3: 185 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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

SELECT PRODUCT CITATIONS

1. Tseng, P.C., et al. 2014. An increase in integrin-linked kinase non-canonically confers NF-κB-mediated growth advantages to gastric cancer cells by activating ERK1/2. *Cell Commun. Signal.* 12: 69.

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 or our catalog for detailed protocols and support products.


 MONOS
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Try **IQGAP3 (D-10): sc-393451**, our highly recommended monoclonal alternative to IQGAP3 (H-55).