SANTA CRUZ BIOTECHNOLOGY, INC.

IQGAP3 (Q-14): sc-162960

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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

1. Eudy, J.D., et al. 1998. Mutation of a gene encoding a protein with extracellular matrix motifs in Usher syndrome type IIa. Science 280: 1753-1757.
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.

CHROMOSOMAL LOCATION

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

SOURCE

IQGAP3 (Q-14) is an affinity purified goat polyclonal antibody raised against a peptide 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.

Blocking peptide available for competition studies, sc-162960 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

IQGAP3 (Q-14) 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 (Q-14) 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.

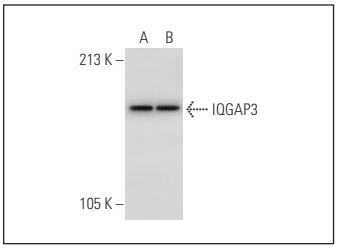
Molecular Weight of IQGAP3: 185 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206 or HeLa whole cell lysate: sc-2200.

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



IQGAP3 (Q-14): sc-162960. Western blot analysis of IQGAP3 expression in MCF7 (**A**) and HeLa (**B**) whole cell lysates.

RESEARCH USE

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

MONOS Satisfaction Guaranteed

Try **IQGAP3 (D-10): sc-393451**, our highly recommended monoclonal alternative to IQGAP3 (Q-14).