IQGAP3 (D-10): sc-393451

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, four 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.

CHROMOSOMAL LOCATION

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

SOURCE

IQGAP3 (D-10) is a mouse monoclonal antibody raised against amino acids 538-592 mapping within an internal region of IQGAP3 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.

IQGAP3 (D-10) is available conjugated to agarose (sc-393451 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-393451 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393451 PE), fluorescein (sc-393451 FITC), Alexa Fluor® 488 (sc-393451 AF488), Alexa Fluor® 546 (sc-393451 AF546), Alexa Fluor® 594 (sc-393451 AF594) or Alexa Fluor® 647 (sc-393451 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-393451 AF680) or Alexa Fluor® 790 (sc-393451 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

RESEARCH USE

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

APPLICATIONS

IQGAP3 (D-10) is recommended for detection of IQGAP3 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

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.
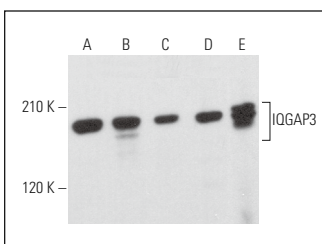
Molecular Weight of IQGAP3: 185 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206, JAR cell lysate: sc-2276 or human placenta extract: sc-363772.
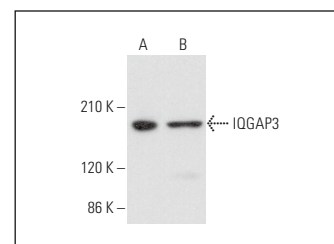
RECOMMENDED SUPPORT REAGENTS

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.

DATA

IQGAP3 (D-10): sc-393451. Western blot analysis of IQGAP3 expression in MCF7 (**A**), HeLa (**B**), JAR (**C**) and RAW 264.7 (**D**) whole cell lysates and human placenta tissue extract (**E**).

IQGAP3 (D-10): sc-393451. Western blot analysis of IQGAP3 expression in MCF7 (**A**) and SK-BR-3 (**B**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Cidad, P., et al. 2021. Voltage-dependent conformational changes of Kv1.3 channels activate cell proliferation. J. Cell. Physiol. 236: 4330-4347.

STORAGE

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

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA