SANTA CRUZ BIOTECHNOLOGY, INC.

GIGYF2 (A-12): sc-393918

BACKGROUND

GIGYF2 (GRB10 interacting GYF protein 2), also known as GYF2, PERQ2, PERQ3, PARK11 or TNRC15, is a 1,299 amino acid protein that may be involved in the regulation of tyrosine kinase receptor signaling, including IGF-I and insulin receptors. Belonging to the PERQ family of proteins, GIGYF2 contains long stretches of glutamine and glutamic acid residues. Mutations in the gene encoding GIGYF2 are the cause of Parkinson disease type 11 (PARK11), which is characterized by bradykinesia, resting tremor, muscular rigidity and postural instability. Parkinson's disease involves the loss of dopaminergic neurons in the substantia nigra and the presence of Lewy bodies (intraneuronal accumulations of aggregated proteins), in surviving neurons in various areas of the brain. PARK11 may show age-dependent or reduced penetrance. GIGYF2 exists as two alternatively spliced isoforms.

REFERENCES

1. Lautier, C., et al. 2008. Mutations in the GIGYF2 (TNRC15) gene at the PARK11 locus in familial Parkinson disease. Am. J. Hum. Genet. 82: 822-833.
2. Bonifati, V. 2009. Is GIGYF2 the defective gene at the PARK11 locus? Curr. Neurol. Neurosci. Rep. 9: 185-187.
3. Bras, J., et al. 2009. Lack of replication of association between GIGYF2 variants and Parkinson disease. Hum. Mol. Genet. 18: 341-346.
4. Sutherland, G.T., et al. 2009. Haplotype analysis of the PARK 11 gene, GIGYF2, in sporadic Parkinson's disease. Mov. Disord. 24: 449-452.

CHROMOSOMAL LOCATION

Genetic locus: GIGYF2 (human) mapping to 2q37.1; Gigyf2 (mouse) mapping to 1 D.

SOURCE

GIGYF2 (A-12) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 1274-1297 at the C-terminus of GIGYF2 of human origin.

PRODUCT

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

GIGYF2 (A-12) is available conjugated to agarose (sc-393918 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-393918 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393918 PE), fluorescein (sc-393918 FITC), Alexa Fluor® 488 (sc-393918 AF488), Alexa Fluor® 546 (sc-393918 AF546), Alexa Fluor® 594 (sc-393918 AF594) or Alexa Fluor® 647 (sc-393918 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-393918 AF680) or Alexa Fluor® 790 (sc-393918 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-393918 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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APPLICATIONS

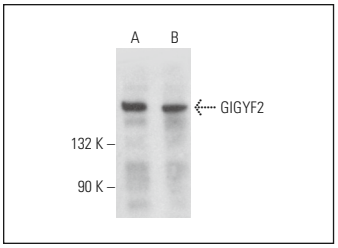
GIGYF2 (A-12) is recommended for detection of GIGYF2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 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 GIGYF2 siRNA (h): sc-94610, GIGYF2 siRNA (m): sc-145397, GIGYF2 shRNA Plasmid (h): sc-94610-SH, GIGYF2 shRNA Plasmid (m): sc-145397-SH, GIGYF2 shRNA (h) Lentiviral Particles: sc-94610-V and GIGYF2 shRNA (m) Lentiviral Particles: sc-145397-V.

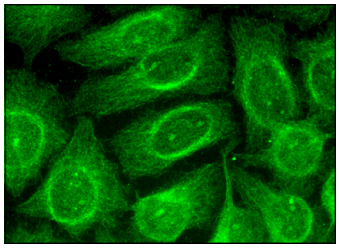
Molecular Weight of GIGYF2: 150 kDa.

Positive Controls: COLO 205 whole cell lysate: sc-364177 or HeLa whole cell lysate: sc-2200.

DATA



GIGYF2 (A-12): sc-393918. Western blot analysis of GIGYF2 expression in COLO 205 (**A**) and HeLa (**B**) whole cell lysates.



GIGYF2 (A-12): sc-393918. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic and nuclear localization.

SELECT PRODUCT CITATIONS

1. Tollenaere, M.A.X., et al. 2019. GIGYF1/2-driven cooperation between ZNF598 and TTP in posttranscriptional regulation of inflammatory signaling. Cell Rep. 26: 3511-3521.e4.
2. Sinha, N.K., et al. 2020. EDF1 coordinates cellular responses to ribosome collisions. Elife 9: e58828.
3. Yang, W., et al. 2022. Elevated GIGYF2 expression suppresses tumor migration and enhances sensitivity to temozolomide in malignant glioma. Cancer Gene Ther. 29: 750-757.

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.