SANTA CRUZ BIOTECHNOLOGY, INC.

GIPC (B-6): sc-376697

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

GIPC, for GAIP interacting protein at the C terminus (also designated SEMCAP-1 or synectin), is a PDZ domain containing protein that interacts with RGS-GAIP, a GTPase-activating protein (GAP) for $G_{\alpha i}$ subunits. GIPC was also identified as TIP-2, a protein that interacts with the viral oncoprotein TAX, which transactivates viral and cellular promoters through interactions with various transcription factors. PDZ domain containing proteins are primarily localized to cell-cell junctions in epithelial cells and neurons where they coordinate the assembly of multiprotein complexes. GIPC specifically localizes to clusters of vesicles near the plasma membrane and participates in G protein-coupled signaling pathway involved in regulating clathrin-coated vesicular trafficking. GIPC also associates with membrane bound semaphorin F (M-SemF), which is involved in neuronal axon growth, and it appears to regulate the subcellular distribution of M-SemF in the brain.

REFERENCES

1. Ranganathan, R. and Ross, E.M. 1997. PDZ domain proteins: scaffolds for signaling complexes. Curr. Biol. 7: R770-R773.
2. De Vries, L., Lou, X., Zhao, G., Zheng, B. and Farquhar, M.G. 1998. GIPC, a PDZ domain containing protein, interacts specifically with the C-terminus of RGS-GAIP. Proc. Natl. Acad. Sci. USA 95: 12340-12345.
3. Rousset, R., Fabre, S., Desbois, C., Bantignies, F. and Jalinot, P. 1998. The C-terminus of the HTLV-1 TAX oncoprotein mediates interaction with the PDZ domain of cellular proteins. Oncogene 16: 643-654.
4. Cai, H. and Reed, R.R. 1999. Cloning and characterization of neuropilin-1-interacting protein: a PSD-95/Dlg/ZO-1 domain-containing protein that interacts with the cytoplasmic domain of neuropilin-1. J. Neurosci. 19: 6519-6527.
5. Wang, L.H., Kalb, R.G. and Strittmatter, S.M. 1999. A PDZ protein regulates the distribution of the transmembrane semaphorin, M-SemF. J. Biol. Chem. 274: 14137-14146.

CHROMOSOMAL LOCATION

Genetic locus: GIPC1 (human) mapping to 19p13.12; Gipc1 (mouse) mapping to 8 C2.

SOURCE

GIPC (B-6) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 303-331 at the C-terminus of GIPC 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.

Blocking peptide available for competition studies, sc-376697 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

RESEARCH USE

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

APPLICATIONS

GIPC (B-6) is recommended for detection of GIPC 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).

GIPC (B-6) is also recommended for detection of GIPC in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for GIPC siRNA (h): sc-35475, GIPC siRNA (m): sc-35476, GIPC shRNA Plasmid (h): sc-35475-SH, GIPC shRNA Plasmid (m): sc-35476-SH, GIPC shRNA (h) Lentiviral Particles: sc-35475-V and GIPC shRNA (m) Lentiviral Particles: sc-35476-V.

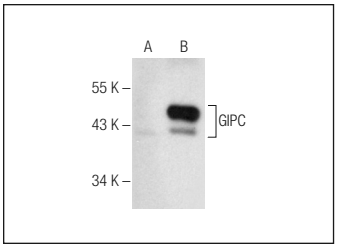
Molecular Weight of GIPC: 40 kDa.

Positive Controls: A-673 cell lysate: sc-2414, Caki-1 cell lysate: sc-2224 or GIPC (h): 293T Lysate: sc-170835.

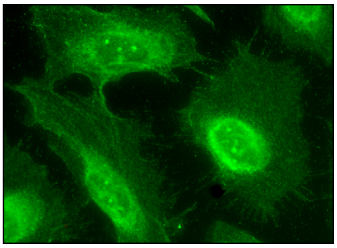
RECOMMENDED SUPPORT REAGENTS

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



GIPC (B-6): sc-376697. Western blot analysis of GIPC expression in non-transfected: sc-117752 (**A**) and human GIPC transfected: sc-170835 (**B**) 293T whole cell lysates.



GIPC (B-6): sc-376697. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane and nuclear localization.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.