SANTA CRUZ BIOTECHNOLOGY, INC.

GIPC (C-9): sc-166148

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 (C-9) is a mouse monoclonal antibody raised against amino acids 1-55 of GIPC of human origin.

PRODUCT

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

STORAGE

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

APPLICATIONS

GIPC (C-9) 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).

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.

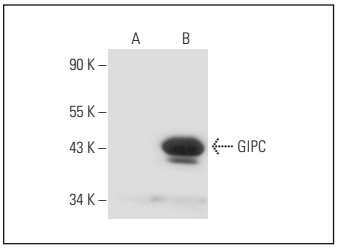
Molecular Weight of GIPC: 40 kDa.

Positive Controls: A-673 cell lysate: sc-2414, GIPC (m): 293T Lysate: sc-110252 or GIPC (h): 293T Lysate: sc-170835.

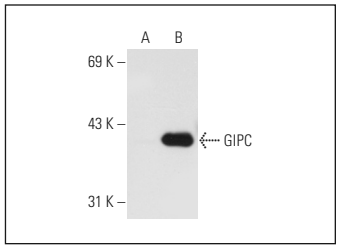
RECOMMENDED SUPPORT REAGENTS

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 (C-9): sc-166148. Western blot analysis of GIPC expression in non-transfected: sc-117752 (**A**) and human GIPC transfected: sc-170835 (**B**) 293T whole cell lysates.



GIPC (C-9): sc-166148. Western blot analysis of GIPC expression in non-transfected: sc-117752 (**A**) and mouse GIPC transfected: sc-110252 (**B**) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Singer, A., Deuse, Y., Kochm, U., Hölscher, T., Pfitzmann, D., Jakob, C., Hehlgans, S., Baretton, G.B., Rentsch, A., Baumann, M., Muders, M.H. and Krause, M. 2012. Impact of the adaptor protein GIPC1/Synectin on radioresistance and survival after irradiation of prostate cancer. Strahlenther. Onkol. 188: 1125-1132.

RESEARCH USE

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