SANTA CRUZ BIOTECHNOLOGY, INC.

GIPC (N-19): sc-9648

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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: R770-773.
2. De Vries, L., et al. 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., et al. 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.

CHROMOSOMAL LOCATION

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

SOURCE

GIPC (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of GIPC 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-9648 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.

RESEARCH USE

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

APPLICATIONS

GIPC (N-19) is recommended for detection of GIPC 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).

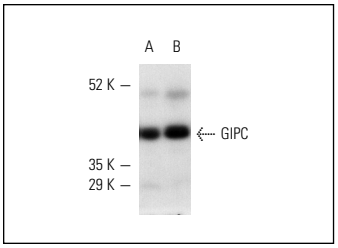
GIPC (N-19) is also recommended for detection of GIPC in additional species, including canine and bovine.

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.

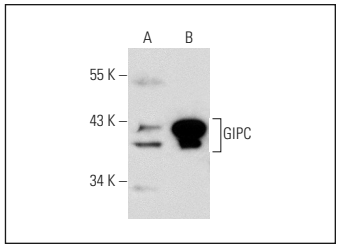
Molecular Weight of GIPC: 40 kDa.

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

DATA



GIPC (N-19): sc-9648. Western blot analysis of GIPC expression in A-673 (**A**) and Caki-1 (**B**) whole cell lysates.



GIPC (N-19): sc-9648. Western blot analysis of GIPC expression in non-transfected: sc-117752 (**A**) and human GIPC transfected: sc-170835 (**B**) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Davey, F., et al. 2005. Synapse associated protein 102 is a novel binding partner to the cytoplasmic terminus of neurone-glial related cell adhesion molecule. J. Neurochem. 94: 1243-1253.
2. Lahteenvuo, J.E., et al. 2009. Vascular endothelial growth factor-B induces myocardium-specific angiogenesis and arteriogenesis via vascular endothelial growth factor receptor-1- and neuropilin receptor-1-dependent mechanisms. Circulation 119: 845-856.
3. Chittenden, T.W., et al. 2010. Therapeutic implications of GIPC1 silencing in cancer. PLoS ONE 5: e15581.