

GIPC1 Antibody / PDZ domain-containing protein GIPC1 (FY13277)

Catalog No.	Formulation	Size
FY13277	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

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Availability	1-2 days
Species Reactivity	Human, Mouse, Rat
Format	Lyophilized
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na ₂ HPO ₄ .
UniProt	O14908
Applications	Western Blot : 0.25-0.5ug/ml Immunohistochemistry : 2-5ug/ml Immunocytochemistry : 5ug/ml Immunofluorescence : 5ug/ml Flow Cytometry : 1-3ug/million cells ELISA : 0.1-0.5ug/ml
Limitations	This GIPC1 antibody is available for research use only.

Description

GIPC1 antibody detects PDZ domain-containing protein GIPC1, a cytoplasmic adaptor protein that regulates receptor trafficking, cell signaling, and cytoskeletal organization. The UniProt recommended name is PDZ domain-containing protein GIPC1 (GIPC1). This multifunctional scaffold protein interacts with a wide variety of transmembrane receptors, G-protein coupled receptors, and signaling adaptors through its conserved PDZ domain, influencing signal transduction and vesicular transport.

Functionally, GIPC1 antibody identifies a 333-amino-acid protein that contains a central PDZ domain responsible for binding the C-terminal motifs of target proteins such as TGFbeta receptor III, GLUT1, and neuropilin-1. GIPC1 participates in endocytic recycling and intracellular trafficking of these receptors, thereby modulating cellular responses to growth factors, adhesion molecules, and hormones. Additionally, GIPC1 acts as a linker between membrane receptors and the actin cytoskeleton via interactions with myosin VI, regulating cell polarity and motility.

The GIPC1 gene is located on chromosome 19p13.12 and is expressed ubiquitously, with high levels found in epithelial, neuronal, and endothelial tissues. Its expression is regulated during development and by extracellular stimuli such as growth factors and oxidative stress. GIPC1 is essential for maintaining proper vesicle transport and receptor localization in diverse cell types.

Pathologically, altered GIPC1 expression has been implicated in cancer progression, angiogenesis, and neurological disorders. Overexpression in breast, pancreatic, and gastric cancers enhances tumor cell proliferation and migration by stabilizing growth factor receptor signaling. In neurons, dysregulated GIPC1 may disrupt synaptic vesicle trafficking and signaling. Research using GIPC1 antibody supports studies in receptor trafficking, cancer signaling, and cytoskeletal regulation.

GIPC1 antibody is validated for western blotting, immunohistochemistry, and immunofluorescence to detect adaptor proteins involved in signal transduction. NSJ Bioreagents provides GIPC1 antibody reagents optimized for research in receptor recycling, endocytosis, and actin-coupled signaling pathways.

Structurally, PDZ domain-containing protein GIPC1 includes an N-terminal GH1 domain for dimerization, a central PDZ domain for C-terminal binding to target proteins, and a C-terminal GH2 domain for myosin VI interaction. This modular structure enables GIPC1 to act as a versatile scaffold that coordinates endocytic transport and receptor-mediated signaling. This antibody enables exploration of GIPC1's role in intracellular trafficking, cancer progression, and signal compartmentalization.

Application Notes

Optimal dilution of the GIPC1 antibody should be determined by the researcher.

Immunogen

E.coli-derived human GIPC1 recombinant protein (Position: H66-Y333) was used as the immunogen for the GIPC1 antibody.

Storage

After reconstitution, the GIPC1 antibody can be stored for up to one month at 4°C. For long-term, aliquot and store at -20°C. Avoid repeated freezing and thawing.