GIPC3 Antibody / PDZ domain-containing protein GIPC3 / C19orf64 (FY12533)

Catalog No.	Formulation	Size
FY12533	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

Availability	1-2 days
Species Reactivity	Human, 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 Na2HPO4.
UniProt	Q8TF64
Applications	ELISA : 0.1-0.5ug/ml Flow Cytometry : 1-3ug/million cells Immunofluorescence : 5ug/ml Immunocytochemistry : 5ug/ml Western Blot : 0.25-0.5ug/ml
Limitations	This GIPC3 antibody is available for research use only.

Description

GIPC3 antibody detects PDZ domain-containing protein GIPC3, a cytoplasmic adaptor protein involved in vesicular trafficking, receptor signaling, and auditory hair cell function. GIPC3 belongs to the GIPC family of PDZ domain-containing proteins that interact with transmembrane receptors to regulate endocytosis and intracellular transport. The GIPC3 antibody is used to study sensory biology, intracellular signaling, and genetic hearing loss.

GIPC3 is encoded by the GIPC3 gene located on human chromosome 19p13.3. The protein is approximately 36 kilodaltons and contains a central PDZ domain that binds C-terminal motifs of target proteins, as well as N- and C-terminal regions that mediate dimerization and association with myosin VI. Through these interactions, GIPC3 organizes membrane trafficking complexes that control receptor recycling and vesicle transport along actin filaments.

The GIPC3 antibody detects a 36 kilodalton band by western blot and shows cytoplasmic punctate localization in sensory epithelial cells. In the cochlea, GIPC3 is essential for hair cell synapse formation and auditory neurotransmission.

Mutations in GIPC3 cause hereditary nonsyndromic deafness (DFNB72) by disrupting vesicular transport between inner hair cells and spiral ganglion neurons, leading to progressive hearing loss.

Functionally, GIPC3 modulates receptor signaling pathways, including those mediated by TGF-beta and IGF1, by regulating receptor endocytosis and recycling. It also interacts with proteins such as APPL1 and neuropilin, influencing cell migration and survival signaling. In neurons, GIPC3 may participate in axonal transport and synaptic vesicle cycling.

Beyond the auditory system, altered expression of GIPC3 has been linked to tumor progression and metastasis through modulation of growth factor receptor trafficking. Its PDZ-mediated interactions are targets for potential therapeutic inhibition in cancer and neurodegenerative disease. NSJ Bioreagents provides a validated GIPC3 antibody optimized for western blot, immunofluorescence, and cochlear tissue staining, supporting research into vesicular trafficking, receptor regulation, and auditory function.

Application Notes

Optimal dilution of the GIPC3 antibody should be determined by the researcher.

Immunogen

E.coli-derived human GIPC3 recombinant protein (Position: H45-G312) was used as the immunogen for the GIPC3 antibody.

Storage

After reconstitution, the GIPC3 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.