

GLIPR2 Antibody / GLI pathogenesis-related protein 2 (FY12956)

Catalog No.	Formulation	Size
FY12956	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	Q9H4G4
Applications	ELISA : 0.1-0.5ug/ml Flow Cytometry : 1-3ug/million cells Immunoprecipitation : 2-4ug/500ug of lysate Immunohistochemistry : 2-5ug/ml Western Blot : 0.25-0.5ug/ml
Limitations	This GLIPR2 antibody is available for research use only.

Description

GLIPR2 antibody detects GLI pathogenesis-related protein 2, a member of the pathogenesis-related (PR-1) protein superfamily implicated in autophagy regulation, cellular stress response, and tumor progression. The UniProt recommended name is GLI pathogenesis-related protein 2 (GLIPR2), also known as Golgi-associated plant pathogenesis-related protein 1 domain-containing protein 2 (GAPR-1). GLIPR2 is a lipid raft-associated protein predominantly localized to the Golgi apparatus and cytoplasmic membranes, where it contributes to membrane homeostasis and cell survival pathways.

Functionally, GLIPR2 antibody recognizes a 172-amino-acid protein that plays a dual role in regulating autophagy and cellular differentiation. GLIPR2 interacts with Beclin-1, a central component of the autophagy initiation complex, to modulate autophagosome formation. Overexpression of GLIPR2 inhibits autophagic flux, whereas its depletion enhances autophagy under stress conditions. This regulatory balance links GLIPR2 to processes such as tumor suppression, cell death, and immune modulation. The protein is expressed in multiple tissues, including liver, kidney, and lung, and its expression is inducible under oxidative or endoplasmic reticulum stress.

The GLIPR2 gene is located on chromosome 9p13.3 and encodes a secreted and membrane-associated protein characterized by a conserved CAP (Cysteine-rich secretory proteins, Antigen 5, and Pathogenesis-related 1) domain. This structural motif enables interactions with lipids, membranes, and signaling proteins, mediating responses to cellular stress. GLIPR2 is known to form homodimers and is subject to regulation by cholesterol content in the Golgi membrane. This localization allows it to influence vesicle trafficking and protein processing under metabolic challenge.

GLIPR2 antibody is widely used in research investigating autophagy, lipid homeostasis, and tumor biology. In cancer studies, GLIPR2 functions as a modulator of epithelial-to-mesenchymal transition (EMT), influencing cell adhesion, migration, and invasion. Dysregulated GLIPR2 expression has been linked to aggressive tumor phenotypes, including hepatocellular carcinoma and renal cell carcinoma. In non-cancer contexts, GLIPR2 participates in innate immune regulation and Golgi stress adaptation. It also contributes to lung tissue integrity by modulating surfactant secretion and inflammatory signaling.

At the molecular level, GLIPR2 interacts with proteins involved in oxidative stress response and chaperone-assisted folding. Its CAP domain facilitates binding to phosphatidylinositol lipids, anchoring it to specific membrane compartments. The GLIPR2 antibody is an essential tool for detecting this protein in cell biology, immunofluorescence, and immunoblotting applications. Its detection assists in understanding Golgi function, autophagy balance, and membrane organization under normal and pathological conditions.

NSJ Bioreagents provides GLIPR2 antibody reagents validated for use in autophagy, oncology, and membrane biology research, supporting studies of stress signaling and intracellular trafficking mechanisms.

Application Notes

Optimal dilution of the GLIPR2 antibody should be determined by the researcher.

Immunogen

E.coli-derived human GLIPR2 recombinant protein (Position: M1-K154) was used as the immunogen for the GLIPR2 antibody.

Storage

After reconstitution, the GLIPR2 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.