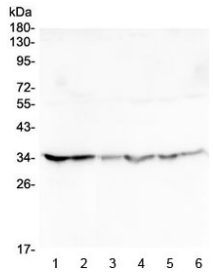
GOLPH3 Antibody / Golgi Phosphoprotein 3 Antibody (RQ4571)

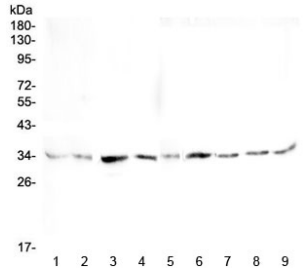
Catalog No.	Formulation	Size
RQ4571	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

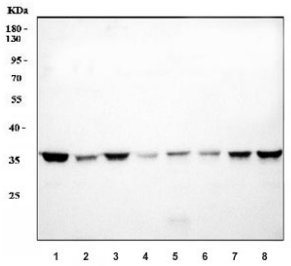
Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity purified
Buffer	Lyophilized from 1X PBS with 2% Trehalose and 0.025% sodium azide
UniProt	Q9H4A6
Localization	Cytoplasm, plasma membrane
Applications	Western blot: 0.5-1ug/ml Immunohistochemistry (FFPE): 2-5ug/ml Immunofluorescence: 5ug/ml Immunoprecipitation: 2ug per 500ug of lysate Direct ELISA: 0.1-0.5ug/ml (recombinant human protein)
Limitations	This GOLPH3 Antibody / Golgi Phosphoprotein 3 Antibody is available for research use only.



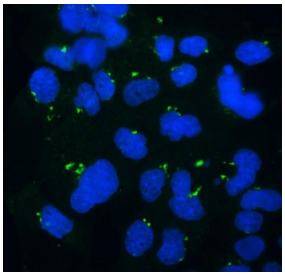
GOLPH3 Antibody in Human Cancer Cell Lines and Placenta WB. Western blot testing of GOLPH3 Antibody / Golgi Phosphoprotein 3 Antibody at 0.5 ug/ml using human lysates from 1) HeLa cells, 2) placenta, 3) U-2 OS cells, 4) Caco-2 cells, 5) SW620 cells and 6) A549 cells. A prominent band is detected at approximately 34 kDa, consistent with the predicted molecular weight of GOLPH3. This GOLPH3 Antibody demonstrates detection of Golgi Phosphoprotein 3 across multiple human cancer cell lines and placenta tissue.



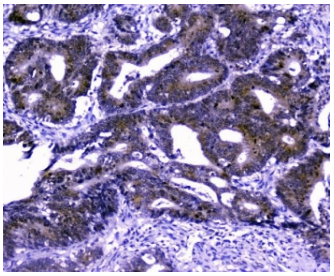
GOLPH3 Antibody in Rat and Mouse Tissues WB. Western blot testing of GOLPH3 Antibody / Golgi Phosphoprotein 3 Antibody at 0.5 ug/ml using lysates from 1) rat heart, 2) rat brain, 3) rat stomach, 4) rat testis, 5) mouse heart, 6) mouse brain, 7) mouse stomach, 8) mouse testis and 9) mouse NIH3T3 cells. A prominent band is detected at approximately 34 kDa, consistent with the predicted molecular weight of GOLPH3. This GOLPH3 Antibody demonstrates detection of Golgi Phosphoprotein 3 across multiple rat and mouse tissues and cells.



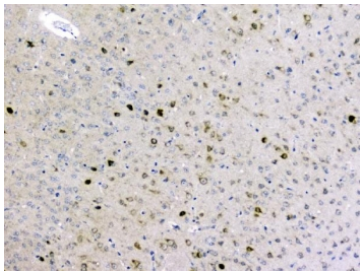
GOLPH3 Antibody in Human, Rat and Mouse Samples WB. Western blot testing of GOLPH3 Antibody / Golgi Phosphoprotein 3 Antibody at 0.5 ug/ml using lysates from 1) human HeLa cells, 2) human 293T cells, 3) human MDA-MB-453 breast cancer cells, 4) human A431 epidermoid carcinoma cells, 5) rat lung, 6) rat testis, 7) mouse lung and 8) mouse testis. A prominent band is detected at approximately 34 kDa, consistent with the predicted molecular weight of GOLPH3. This GOLPH3 Antibody demonstrates detection of Golgi Phosphoprotein 3 in human, rat and mouse samples.



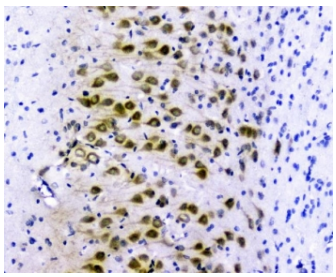
GOLPH3 Antibody in Human A431 Epidermoid Carcinoma Cells IF. Immunofluorescence staining of FFPE human A431 epidermoid carcinoma cells with GOLPH3 Antibody / Golgi Phosphoprotein 3 Antibody (green). Heat-induced epitope retrieval (HIER) was performed by steaming in pH 6 citrate buffer for 20 min. Nuclei were counterstained with DAPI (blue). GOLPH3 staining is concentrated in discrete perinuclear structures, consistent with its localization to the Golgi apparatus. This GOLPH3 Antibody enables visualization of Golgi Phosphoprotein 3 expression and localization in human epidermoid carcinoma cells.



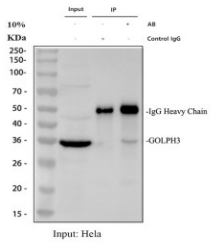
GOLPH3 Antibody in Human Intestinal Cancer IHC. Immunohistochemistry staining of FFPE human intestinal cancer tissue with GOLPH3 Antibody / Golgi Phosphoprotein 3 Antibody. Heat-induced epitope retrieval (HIER) was performed by boiling tissue sections in pH 8 EDTA for 20 min, followed by cooling before testing. GOLPH3 staining is observed in the intestinal tumor cells. This GOLPH3 Antibody demonstrates detection of Golgi Phosphoprotein 3 in human intestinal cancer tissue.



GOLPH3 Antibody in Mouse Brain IHC. Immunohistochemistry staining of FFPE mouse brain tissue with GOLPH3 Antibody / Golgi Phosphoprotein 3 Antibody. Heat-induced epitope retrieval (HIER) was performed by boiling tissue sections in pH 8 EDTA for 20 min, followed by cooling before testing. GOLPH3 staining is observed in cells throughout the brain tissue, with prominent staining in a subset of cells. This GOLPH3 Antibody demonstrates detection of Golgi Phosphoprotein 3 in mouse brain tissue.



GOLPH3 Antibody in Rat Brain IHC. Immunohistochemistry staining of FFPE rat brain tissue with GOLPH3 Antibody / Golgi Phosphoprotein 3 Antibody. Heat-induced epitope retrieval (HIER) was performed by boiling tissue sections in pH 8 EDTA for 20 min, followed by cooling before testing. GOLPH3 staining is observed in neuronal populations within the brain tissue. This GOLPH3 Antibody demonstrates detection of Golgi Phosphoprotein 3 in rat brain tissue.



GOLPH3 Antibody Immunoprecipitation from Human HeLa Cells IP. Immunoprecipitation of GOLPH3 from human HeLa whole cell lysate was performed using GOLPH3 Antibody / Golgi Phosphoprotein 3 Antibody. Lane 1 contains 30 ug of HeLa whole cell lysate, lane 2 is the rabbit IgG control and lane 3 contains GOLPH3 immunoprecipitated from 500 ug of HeLa lysate using 2 ug of antibody. Western blot detection was performed with the antibody at 0.5 ug/ml followed by goat anti-rabbit IgG-HRP and ECL detection. A specific GOLPH3 band is detected at approximately 36 kDa, close to its expected molecular weight of approximately 34 kDa. This GOLPH3 Antibody demonstrates immunoprecipitation of Golgi Phosphoprotein 3 from human HeLa cells.

Description

GOLPH3 Antibody / Golgi Phosphoprotein 3 Antibody targets GOLPH3, a highly conserved peripheral membrane protein associated with the Golgi apparatus. GOLPH3, also known as Golgi phosphoprotein 3, GPP34 and GMx33, participates in the organization and function of Golgi membranes and has important roles in intracellular membrane trafficking. Through interactions with Golgi lipids and components of the cellular trafficking machinery, GOLPH3 helps coordinate protein and lipid movement through the secretory pathway.

GOLPH3 binds phosphatidylinositol 4-phosphate (PI4P), a phosphoinositide enriched at Golgi membranes. This interaction contributes to the localization of GOLPH3 at the Golgi and allows it to participate in processes controlling Golgi morphology and vesicular transport. GOLPH3 can also interact with the unconventional motor protein MYO18A, linking Golgi membranes to the actin cytoskeleton. This relationship has been implicated in maintaining Golgi architecture and generating forces involved in membrane budding and trafficking. A GOLPH3 Antibody can therefore support research into Golgi organization, membrane dynamics and intracellular protein transport.

Beyond its structural and trafficking functions, GOLPH3 has attracted considerable interest in cancer and signal transduction research. Increased GOLPH3 expression or gene copy number has been reported in multiple tumor types, and GOLPH3 has been investigated as a potential oncogenic factor. Its cancer-associated functions have been linked to pathways controlling cell growth, proliferation, survival and responses to cellular stress. GOLPH3 has also been connected with mTOR signaling, providing a potential mechanistic link between Golgi-associated trafficking processes and pathways that regulate cellular growth.

The Golgi apparatus also participates in cellular responses to DNA damage and other forms of stress. GOLPH3-dependent changes in Golgi morphology have been studied as part of these responses, further connecting this protein with cytoskeletal organization, membrane trafficking and cell survival. Altered GOLPH3 activity may consequently influence several processes relevant to tumor progression, including proliferation, migration, invasion and resistance to cellular stress.

NSJ Bioreagents provides antibodies for research into Golgi biology, intracellular trafficking, cancer and cellular signaling. A Golgi Phosphoprotein 3 Antibody can support studies of GOLPH3 expression and localization, Golgi organization, vesicular transport, cytoskeletal interactions and cancer-associated signaling mechanisms.

GOLPH3 connects Golgi membrane trafficking with pathways involved in cellular growth and cancer biology; explore related signaling targets on our Signal Transduction Antibodies page.

Application Notes

Optimal dilution of the GOLPH3 Antibody / Golgi Phosphoprotein 3 Antibody should be determined by the researcher.

Immunogen

Amino acids K56-K298 from the human protein were used as the immunogen for the GOLPH3 antibody.

Storage

After reconstitution, the GOLPH3 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

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