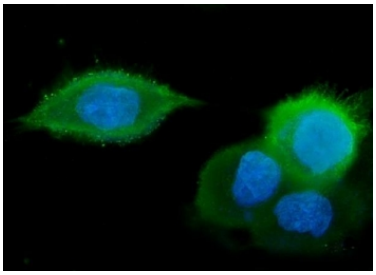
GM130 Antibody / GOLGA2 [clone 4G3] (RQ4921)

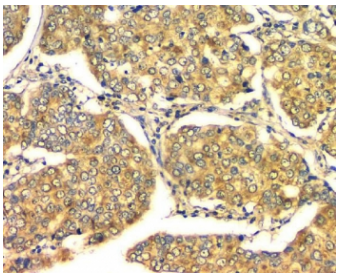
Catalog No.	Formulation	Size
RQ4921	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

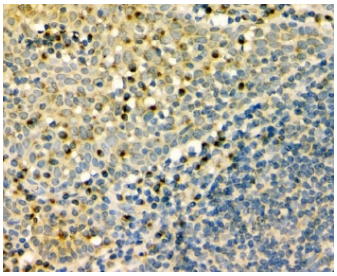
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG2b
Clone Name	4G3
Purity	Purified
Buffer	Lyophilized from 1X PBS with 2% Trehalose and 0.025% sodium azide
UniProt	Q08379
Localization	Cytoplasmic
Applications	Western Blot : 0.5-1ug/ml Immunohistochemistry (FFPE) : 1-2ug/ml Immunofluorescence : 2-4ug/ml Flow Cytometry : 1-3ug/million cells
Limitations	This GM130 antibody is available for research use only.



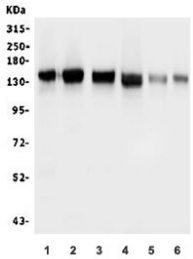
Immunofluorescent staining of FFPE human A431 cells with GM130 antibody (green) and DAPI nuclear stain (blue). HIER: steam section in pH6 citrate buffer for 20 min.



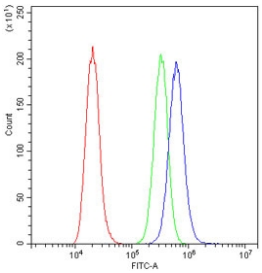
IHC staining of FFPE human breast cancer with GM130 antibody. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



IHC staining of FFPE human tonsil with GM130 antibody. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



Western blot testing of human 1) placenta, 2) K562, 3) Caco-2, 4) A549, 5) A431 and 6) HEK293 cell lysate with GM130 antibody. Predicted molecular weight ~130 kDa.



Flow cytometry testing of human A431 cells with GM130 antibody at 1ug/million cells (blocked with goat sera); Red=cells alone, Green=isotype control, Blue= GM130 antibody.

Description

GM130 Antibody targets Golgin subfamily A member 2, also known as GM130, a peripheral membrane protein encoded by the GOLGA2 gene that functions as a structural component of the Golgi apparatus. GM130 belongs to the golgin family of coiled-coil proteins that play essential roles in maintaining Golgi architecture and supporting vesicle tethering during intracellular membrane trafficking. Through its scaffolding functions, GM130 contributes to proper organization and positioning of Golgi cisternae within the cell.

Functionally, Golgin subfamily A member 2 participates in vesicle docking and fusion events at the cis-Golgi by interacting with vesicle-associated proteins, tethering factors, and regulatory complexes. GM130 serves as a docking platform that helps coordinate the arrival of transport vesicles originating from the endoplasmic reticulum and other Golgi compartments. A GM130 Antibody enables investigation of Golgi structure, vesicle trafficking pathways, and mechanisms that regulate intracellular protein transport in research studies.

GM130 expression is broadly observed in eukaryotic cells, reflecting its role in fundamental cellular processes related to protein sorting and secretion. At the subcellular level, GM130 localizes predominantly to the cis-Golgi membrane, where it associates with Golgi stacks and contributes to their structural integrity. This characteristic localization makes GM130 a widely used marker of the Golgi apparatus in cell biology research. Changes in GM130 distribution may indicate

alterations in Golgi organization, cellular polarity, or vesicular transport activity.

At the molecular level, GM130 is characterized by extended coiled-coil domains that enable protein-protein interactions and formation of elongated tethering structures. These domains allow GM130 to bridge vesicles and Golgi membranes, facilitating spatial organization of trafficking machinery. GM130 also interacts with regulatory proteins involved in Golgi dynamics, linking structural maintenance with signaling pathways that influence membrane trafficking and organelle positioning.

From a biological and disease relevance perspective, proper Golgi organization is critical for maintaining cellular homeostasis, and disruption of golgin proteins such as GM130 has been associated with defects in protein secretion, cell migration, and polarity. Altered Golgi structure has been observed in various disease contexts, including cancer and neurodegenerative disorders, where changes in intracellular trafficking contribute to disease-associated cellular dysfunction. As a result, GM130 is frequently studied as a marker of Golgi integrity and intracellular transport regulation.

GM130 Antibody reagents are valuable tools for studying Golgi apparatus organization, vesicle trafficking mechanisms, and intracellular membrane dynamics. These antibodies support research into cell biology, organelle structure, and disease-associated alterations in protein transport pathways. NSJ Bioreagents provides GM130 Antibody products intended for research use.

Application Notes

Optimal dilution of the GM130 antibody should be determined by the researcher.

Immunogen

Amino acids E796-E913 from the human protein were used as the immunogen for the GM130 antibody.

Storage

After reconstitution, the GM130 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.