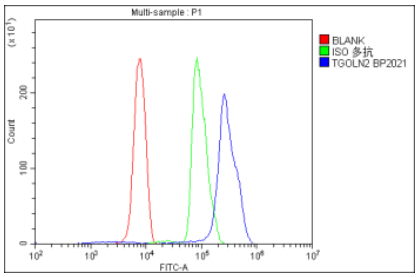
TGOLN2 Antibody / Trans-Golgi network integral membrane protein 2 (FY12425)

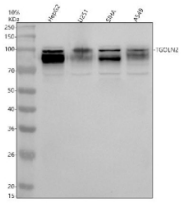
Catalog No.	Formulation	Size
FY12425	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

Availability	1-2 days
Species Reactivity	Human
Format	Lyophilized
Host	Rabbit
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	O43493
Applications	Western Blot : 0.25-0.5ug/ml Flow Cytometry : 1-3ug/million cells ELISA : 0.1-0.5ug/ml
Limitations	This TGOLN2 antibody is available for research use only.



Flow Cytometry analysis of U937 cells using anti-TGOLN2 antibody. Overlay histogram showing U937 cells stained with (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-TGOLN2 antibody (1 ug/million cells) for 30 min at 20oC. DyLight 488 conjugated goat anti-rabbit IgG (5-10 ug/million cells) was used as secondary antibody for 30 minutes at 20oC. Isotype control antibody (Green line) was rabbit IgG (1 ug/million cells) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.



Western blot analysis of TGOLN2 using anti-TGOLN2 antibody. Electrophoresis was performed on a 10% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. Lane 1: human HepG2 whole cell lysates, Lane 2: human U251 whole cell lysates, Lane 3: human SIHA whole cell lysates, Lane 4: human whole cell lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-TGOLN2 antibody at 0.5 ug/ml overnight at 4oC, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal was developed using an ECL Plus Western Blotting Substrate. TGOLN2 (~54-58 kDa predicted) was detected as a broad doublet around 90-100 kDa, consistent with heterogeneous N- and O-linked glycosylation. A weaker band at ~70 kDa likely represents a C-terminally truncated or partially glycosylated fragment, as described previously.

Description

The TGOLN2 antibody targets Trans-Golgi network integral membrane protein 2, also known as TGN46, encoded by the TGOLN2 gene. This type I transmembrane glycoprotein localizes to the trans-Golgi network (TGN), where it participates in protein sorting, trafficking, and recycling between the Golgi apparatus and endosomes. Trans-Golgi network integral membrane protein 2 acts as a marker of the TGN and is essential for maintaining Golgi structure and vesicle organization. The TGOLN2 antibody provides a robust reagent for studying Golgi dynamics, membrane transport, and secretory-pathway regulation.

Trans-Golgi network integral membrane protein 2 cycles between the TGN and plasma membrane via clathrin-coated vesicles, controlling cargo retrieval and receptor recycling. Its luminal domain carries O-linked glycosylation sites that modulate trafficking efficiency. The TGOLN2 antibody allows visualization of this dynamic localization pattern, offering a reliable marker for confocal microscopy and subcellular fractionation studies. Its expression is ubiquitous in secretory cells, particularly in liver, pancreas, and neurons.

TGN46 functions as a sorting receptor for a subset of secreted and membrane proteins, ensuring their correct targeting to the cell surface or lysosomes. The TGOLN2 antibody supports mechanistic research into Golgi transport, revealing how membrane trafficking contributes to cellular polarity and secretion. Through its cytoplasmic tail, TGN46 interacts with adaptor protein complexes (AP-1 and GGA), linking it to clathrin-mediated sorting pathways.

Aberrant Golgi organization is a hallmark of many diseases, including neurodegenerative disorders and cancers. The TGOLN2 antibody is widely used as a Golgi marker in pathology and cell-biology research, helping identify structural changes associated with altered vesicular transport. Changes in TGN46 distribution can reflect stress-induced fragmentation or disrupted trafficking in diseased cells.

The TGOLN2 antibody performs effectively in western blotting, immunofluorescence, and immunohistochemistry, yielding strong perinuclear staining that defines Golgi morphology. NSJ Bioreagents provides this antibody as a validated, high-specificity reagent for studies of membrane trafficking, organelle architecture, and protein secretion. By enabling accurate detection of Trans-Golgi network integral membrane protein 2, the TGOLN2 antibody advances research into the organization and dynamics of the Golgi apparatus and secretory pathway.

Application Notes

Optimal dilution of the TGOLN2 antibody should be determined by the researcher.

Immunogen

E.coli-derived human TGN46/TGOLN2 recombinant protein (Position: E319-K436) was used as the immunogen for the TGOLN2 antibody.

Storage

After reconstitution, the TGOLN2 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.