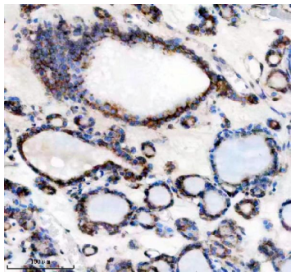
TMED10 Antibody / Transmembrane p24 trafficking protein 10 (FY12040)

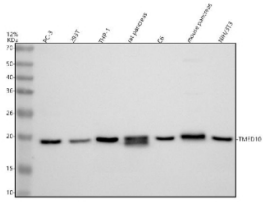
Catalog No.	Formulation	Size
FY12040	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

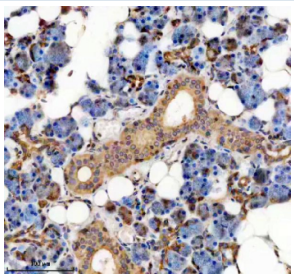
Availability	1-2 days
Species Reactivity	Human, Mouse, Rat
Format	Lyophilized
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	P49755
Localization	Cytoplasm, cell membrane
Applications	Western Blot : 0.25-0.5ug/ml Immunohistochemistry : 2-5ug/ml Immunofluorescence : 5ug/ml Flow Cytometry : 1-3ug/million cells ELISA : 0.1-0.5ug/ml
Limitations	This TMED10 antibody is available for research use only.



IHC analysis of TMED10 using anti-TMED10 antibody. TMED10 was detected in a paraffin-embedded section of human thyroid cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-TMED10 antibody overnight at 4oC. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37oC. The tissue section was developed using an HRP secondary and DAB substrate.



Western blot analysis of TMED10 using anti-TMED10 antibody. Electrophoresis was performed on a 12% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. Lane 1: human PC-3 whole cell lysates, Lane 2: human 293T whole cell lysates, Lane 3: human THP-1 whole cell lysates, Lane 4: rat pancreas tissue lysates, Lane 5: rat C6 whole cell lysates, Lane 6: mouse pancreas tissue lysates, Lane 7: mouse NIH/3T3 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-TMED10 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. The expected band size for TMED10 is at 25 kDa.



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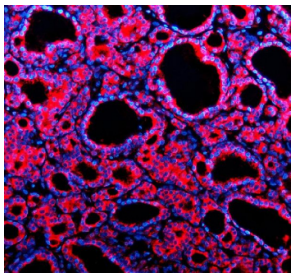
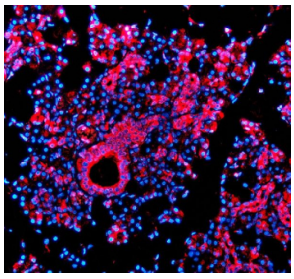


IF analysis of TMED10 using anti-TMED10 antibody (red). TMED10 was detected in a paraffin-embedded section of human thyroid cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 5 ug/ml rabbit anti-TMED10 antibody overnight at 4oC. Cy3 Conjugated Goat Anti-Rabbit IgG was used as secondary antibody at 1:500 dilution and incubated for 30 minutes at 37oC. The section was counterstained with DAPI (blue). Visualize using a fluorescence microscope and filter sets appropriate for the label used.



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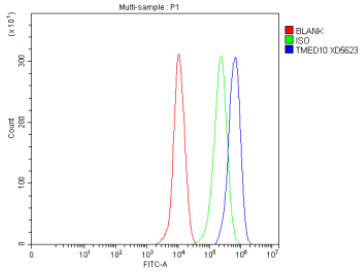

Flow Cytometry analysis of THP-1 cells using anti-TMED10 antibody. Overlay histogram showing THP-1 cells stained with (Blue line). The cells were fixed with 4% paraformaldehyde and blocked with 10% normal goat serum. And then incubated with rabbit anti-TMED10 antibody (1 ug/million cells) for 30 min 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.

Description

TMED10 antibody detects Transmembrane p24 trafficking protein 10, encoded by the TMED10 gene. Transmembrane p24 trafficking protein 10 is a member of the p24 family of cargo receptors that regulate vesicular trafficking between the endoplasmic reticulum and the Golgi apparatus. TMED10 antibody provides researchers with a reliable reagent to study

vesicle transport, protein secretion, and the organization of the early secretory pathway.

Transmembrane p24 trafficking protein 10 is an integral membrane protein with a luminal GOLD domain, a transmembrane region, and a short cytoplasmic tail. Research using TMED10 antibody has shown that it interacts with coat protein complexes COPI and COPII, which mediate vesicle budding and fusion. These interactions allow TMED10 to function as a cargo receptor and regulator of vesicle biogenesis. Its role ensures that proteins are correctly sorted and transported between organelles.

Studies with TMED10 antibody have demonstrated that this protein is essential for the proper trafficking of glycosylphosphatidylinositol anchored proteins and other secretory cargo. Without TMED10, cargo retention and mislocalization occur, disrupting Golgi organization and secretion. This highlights the central importance of TMED10 in maintaining homeostasis of the secretory system.

Dysregulation of Transmembrane p24 trafficking protein 10 has been associated with cancer and neurodegeneration. Research using TMED10 antibody has shown that altered expression modifies the trafficking of growth factor receptors and adhesion molecules, promoting abnormal signaling. Variants in TMED10 have also been linked to altered susceptibility to viral infection, emphasizing its role in cellular defense. These findings underscore its broad physiological and pathological relevance.

TMED10 antibody is commonly used in immunohistochemistry, immunofluorescence, and western blotting. Immunohistochemistry reveals distribution in tissues with active secretion, immunofluorescence highlights Golgi localization, and western blotting quantifies expression levels. These applications make TMED10 antibody a valuable tool for cell biology research.

By providing validated TMED10 antibody reagents, NSJ Bioreagents supports studies into vesicle trafficking, protein secretion, and disease. Detection of Transmembrane p24 trafficking protein 10 provides researchers with insights into how the p24 family of proteins coordinates early secretory pathways.

Application Notes

Optimal dilution of the TMED10 antibody should be determined by the researcher.

Immunogen

E.coli-derived human TMP21/TMED10 recombinant protein (Position: R27-M194) was used as the immunogen for the TMED10 antibody.

Storage

After reconstitution, the TMED10 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.