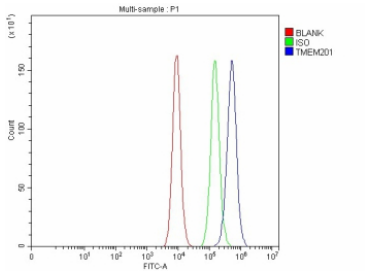
TMEM201 Antibody / Transmembrane protein 201 (FY12323)

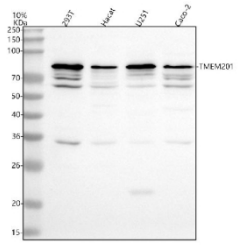
Catalog No.	Formulation	Size
FY12323	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

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	Q5SNT2
Applications	Western Blot: 0.25-0.5ug/ml Flow cytometry: 1-3ug/million cells ELISA: 0.1-0.5ug/ml
Limitations	This TMEM201 antibody is available for research use only.



Flow Cytometry analysis of Caco-2 cells using anti-TMEM201 antibody. Overlay histogram showing Caco-2 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-TMEM201 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 TMEM201 using anti-TMEM201 antibody. Lane 1: human 293T whole cell lysates, Lane 2: human Hacat whole cell lysates, Lane 3: human U251 whole cell lysates, Lane 4: human Caco-2 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-TMEM201 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 enhanced chemiluminescent. Western blot analysis of TMEM201 shows a dominant band at the expected ~72 kDa corresponding to the full-length protein, with several slightly lower bands likely representing differentially glycosylated or processed isoforms commonly observed for nuclear envelope membrane proteins.

Description

TMEM201 Antibody is used to study Transmembrane protein 201, an inner nuclear membrane protein that helps organize the nuclear envelope and coordinate nucleus-to-cytoskeleton communication. Localized at the inner nuclear membrane, Transmembrane protein 201 interacts with elements of the LINC complex that connect nuclear lamins to actin cables, supporting nuclear positioning, cell polarization, and directed migration. By anchoring the nucleus to retrograde actin flow through transmembrane actin-associated nuclear lines, Transmembrane protein 201 influences how cells orient and move in response to external cues, a process relevant to development, wound repair, and vascular remodeling.

Biochemically, Transmembrane protein 201 contains luminal and cytoplasmic regions that permit associations with lamins and cytoskeletal adaptors. These interactions help maintain nuclear envelope integrity and may tune mechanotransduction, allowing cells to translate mechanical forces into gene-regulatory outcomes. Perturbation of Transmembrane protein 201 can disrupt centrosome orientation and impair cell polarity, emphasizing its role at the interface of structure and signaling. In endothelial systems, increased Transmembrane protein 201 activity has been linked with enhanced migration during angiogenic sprouting, underscoring its relevance to vascular biology.

Researchers use TMEM201 Antibody to define inner nuclear membrane architecture by immunofluorescence, co-localize the protein with lamins or SUN/KASH components, and quantify expression under conditions that alter cytoskeletal tension. In immunoblotting, the antibody detects endogenous Transmembrane protein 201 and can monitor isoform abundance or post-translational changes across cell states. Immunoprecipitation with TMEM201 Antibody enables mapping of protein partners at the nuclear envelope, supporting studies that connect nuclear mechanics to transcriptional control and cell fate decisions. Because nuclear positioning and mechanosensitive signaling influence differentiation, immunity, and cancer invasion, this reagent supports a wide set of experimental questions.

The TMEM201 Antibody from NSJ Bioreagents provides dependable performance across imaging and biochemical workflows, allowing laboratories to standardize detection in side-by-side studies of nuclear envelope organization, polarized migration, and endothelial biology. In development models, it can reveal how nuclear anchorage guides morphogenesis; in pathobiology, it helps test whether altered nuclear-cytoskeletal coupling contributes to invasive behavior or impaired tissue repair. For teams integrating live-cell imaging, traction force microscopy, or RNA-seq, pairing functional assays with precise localization data from this antibody can clarify how structural changes at the inner nuclear membrane shape downstream transcriptional programs.

As interest grows in how nuclear architecture governs cell behavior, TMEM201 Antibody provides a practical bridge between nuclear envelope structure and systems-level outcomes. Its use in standard immunocytochemistry, tissue immunohistochemistry, and pulldown experiments makes it a versatile tool for dissecting nuclear positioning, mechanotransduction, and angiogenesis, while helping connect biophysical cues to gene regulation and phenotype in both normal physiology and disease contexts.

TMEM201 Antibody supports rigorous inquiries into nuclear mechanics with a single, reliable probe that integrates cleanly

into multicolor imaging, gel-based quantification, and interactome discovery workflows.

Application Notes

Optimal dilution of the TMEM201 antibody should be determined by the researcher.

Immunogen

E.coli-derived human TMEM201 recombinant protein (Position: R38-R591) was used as the immunogen for the TMEM201 antibody.

Storage

After reconstitution, the TMEM201 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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