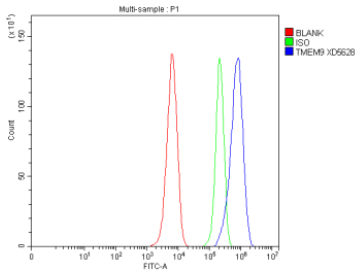
TMEM9 Antibody / Transmembrane protein 9 (FY12298)

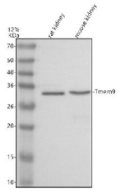
Catalog No.	Formulation	Size
FY12298	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

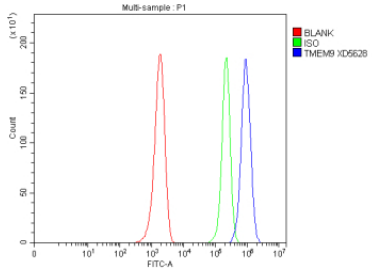
Availability	1-2 days
Species Reactivity	Human, Mouse, Rat
Format	Lyophilized
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	Q9P0T7
Applications	Western Blot: 0.25-0.5ug/ml Flow cytometry: 1-3ug/million cells ELISA: 0.1-0.5ug/ml
Limitations	This TMEM9 antibody is available for research use only.



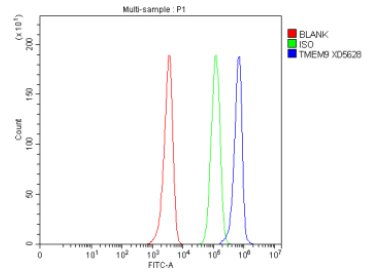
Flow Cytometry analysis of rat C6 cells using anti-TMEM9 antibody. Overlay histogram showing C6 cells stained with (Blue line). The cells were fixed with 4% paraformaldehyde and blocked with 10% normal goat serum. And then incubated with rabbit anti-TMEM9 antibody (1 ug/million cells) for 30 min at 20oC. 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 TMEM9 using anti-TMEM9 antibody. Electrophoresis was performed on a 12% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. Lane 1: rat kidney tissue lysates, Lane 2: mouse kidney tissue 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-TMEM9 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. Expected molecular weight of TMEM9 ~21 kDa (183 aa). In Western blot we observe a band at ~32 kDa, which is consistent with published data showing TMEM9 migrates at ~28-33 kDa when glycosylated. The upward shift is likely due to N-glycosylation of the luminal domain and/or other post-translational modifications of this lysosomal/transmembrane protein.



Flow Cytometry analysis of mouse EL-4 cells using anti-TMEM9 antibody. Overlay histogram showing EL-4 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-TMEM9 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.



Flow Cytometry analysis of human HEL cells using anti-TMEM9 antibody. Overlay histogram showing HEL 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-TMEM9 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

TMEM9 antibody detects Transmembrane protein 9, encoded by the TMEM9 gene on chromosome 1q41. TMEM9 antibody is widely used in research on vesicle trafficking, lysosomal biology, and cancer. TMEM9 is a small lysosomal transmembrane protein that functions as a regulator of vesicle acidification and lysosomal activity. It contributes to autophagy, protein degradation, and receptor recycling, making it important for cell metabolism and signaling.

Structurally, TMEM9 is a ~21 kDa protein predicted to contain multiple transmembrane domains. It localizes to late endosomes and lysosomes, where it interacts with vacuolar H+-ATPases (V-ATPases) to promote acidification of the organelle lumen. This acidification is required for hydrolytic enzyme activity, autophagosome maturation, and lysosomal degradation. TMEM9 is conserved across vertebrates and is essential for maintaining lysosomal homeostasis.

Functionally, TMEM9 promotes lysosomal degradation and autophagy by enhancing V-ATPase assembly. It also regulates receptor recycling and endosomal trafficking. Dysregulation of TMEM9 disrupts lysosomal activity, leading to accumulation of undegraded proteins and impaired autophagy. Researchers use TMEM9 antibody to study vesicle trafficking, lysosomal acidification, and autophagy regulation.

Clinically, TMEM9 has been linked to cancer progression. Overexpression of TMEM9 has been reported in colorectal and liver cancers, where it promotes tumor growth by enhancing Wnt/beta-catenin signaling and metabolic adaptation. It may serve as a biomarker of aggressive tumor behavior and a potential therapeutic target. NSJ Bioreagents provides TMEM9

antibody for lysosomal, cancer, and metabolism studies.

Experimentally, TMEM9 antibody is applied in western blotting to detect the ~21 kDa protein, in immunofluorescence to study lysosomal localization, and in immunohistochemistry to assess tissue-specific expression. Co-immunoprecipitation with TMEM9 antibody helps identify interactions with V-ATPase components.

Application Notes

Optimal dilution of the TMEM9 antibody should be determined by the researcher.

Immunogen

E.coli-derived human TMEM9 recombinant protein (Position: A18-S183) was used as the immunogen for the TMEM9 antibody.

Storage

After reconstitution, the TMEM9 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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