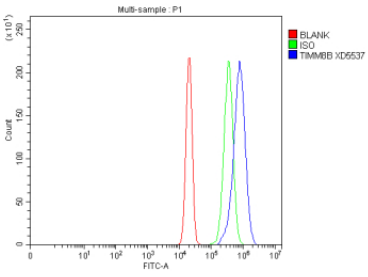
TIMM8B Antibody / Tim8 B (FY12759)

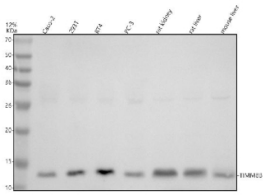
Catalog No.	Formulation	Size
FY12759	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

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	Q9Y5J9
Applications	Western Blot : 0.25-0.5ug/ml Flow Cytometry : 1-3ug/million cells ELISA : 0.1-0.5ug/ml
Limitations	This TIMM8B antibody is available for research use only.



Flow Cytometry analysis of RT4 cells using anti-TIMM8B antibody. Overlay histogram showing RT4 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-TIMM8B 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 TIMM8B using anti-TIMM8B antibody. Electrophoresis was performed on a 12% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. Lane 1: human Caco-2 whole cell lysates, Lane 2: human 293T whole cell lysates, Lane 3: human RT4 whole cell lysates, Lane 4: human PC-3 whole cell lysates, Lane 5: rat kidney tissue lysates, Lane 6: rat liver tissue lysates, Lane 7: mouse liver 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-TIMM8B 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. A specific band is detected at ~12-13 kDa, which is the typical apparent mobility for the ~9-10 kDa TIMM8B on standard SDS-PAGE. Migration of very small mitochondrial proteins is known to appear slightly heavier due to gel system and processing state.

Description

TIMM8B antibody detects Mitochondrial import inner membrane translocase subunit Tim8B, a small chaperone-like protein that assists in importing and assembling hydrophobic carrier proteins into the mitochondrial inner membrane. Encoded by the TIMM8B gene on chromosome 11q14.1, this protein belongs to the mitochondrial intermembrane space (IMS) chaperone complex family, which also includes Tim8A, Tim9, and Tim10. TIMM8B forms part of the TIM8-TIM13 complex that stabilizes and delivers precursor proteins across the IMS to the TIM22 translocase complex, ensuring proper mitochondrial biogenesis and energy metabolism.

Structurally, TIMM8B contains conserved twin CX3C motifs that coordinate zinc ions, stabilizing its folding and interaction with partner subunits. Within the IMS, TIMM8B associates with TIMM13 to form a 70 kilodalton heterohexameric complex. This assembly binds and shuttles hydrophobic transmembrane segments of carrier proteins, preventing their aggregation during translocation. Loss or dysfunction of TIMM8B disrupts mitochondrial protein import, leading to defects in oxidative phosphorylation and metabolic balance. While TIMM8A mutations cause Mohr-Tranebjaerg syndrome, TIMM8B plays a complementary and partially compensatory role in mitochondrial maintenance.

The TIMM8B antibody is widely used in cell biology, mitochondrial, and neurodegeneration research to study protein import mechanisms and mitochondrial function. Western blot analysis identifies a 10 kilodalton band corresponding to TIMM8B, while immunofluorescence reveals punctate mitochondrial localization that colocalizes with markers such as TOM20 and COX IV. This antibody enables precise examination of mitochondrial translocase assembly and protein trafficking. Because mitochondrial dysfunction contributes to neurodegenerative disorders, TIMM8B detection provides valuable insights into pathophysiology and energy metabolism.

Beyond its role in import, TIMM8B contributes to mitochondrial quality control and stress response by maintaining the stability of the carrier import pathway. It supports the biogenesis of metabolite transporters such as ANT, MPC, and phosphate carriers. The TIMM8B antibody supports detailed analysis of these pathways and is validated by NSJ Bioreagents for its applications, ensuring reproducible results in mitochondrial and cellular metabolism studies.

Application Notes

Optimal dilution of the TIMM8B antibody should be determined by the researcher.

Immunogen

E.coli-derived human TIMM8B recombinant protein (Position: M1-Q83) was used as the immunogen for the TIMM8B antibody.

Storage

After reconstitution, the TIMM8B 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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