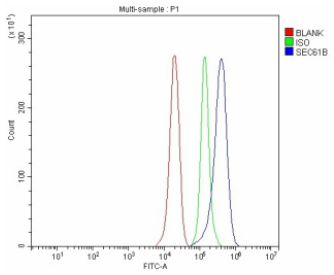
SEC61B Antibody / Sec61 subunit beta (FY12360)

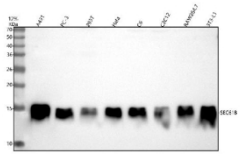
Catalog No.	Formulation	Size
FY12360	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

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	P60468
Applications	ELISA : 0.1-0.5ug/ml Flow Cytometry : 1-3ug/million cells Western Blot : 0.25-0.5ug/ml
Limitations	This SEC61B antibody is available for research use only.



Flow Cytometry analysis of PC-3 cells using anti-SEC61B antibody. Overlay histogram showing PC-3 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-SEC61B 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 SEC61B using anti-SEC61B antibody. Lane 1: human whole cell lysates, Lane 2: human PC-3 whole cell lysates, Lane 3: human 293T whole cell lysates, Lane 4: human Hela whole cell lysates, Lane 5: rat C6 whole cell lysates, Lane 6: mouse C2C12 whole cell lysates, Lane 7: mouse RAW264.7 whole cell lysates, Lane 8: mouse 3T3-L1 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-SEC61B antibody at 0.25 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. SEC61B (~10â€“11 kDa predicted) was detected as a band at ~14 kDa, likely reflecting its small size combined with membrane integration and potential post-translational modification or complex retention which slows migration in SDSâ€“PAGE.

Description

The SEC61B antibody targets Protein transport protein Sec61 subunit beta, a component of the Sec61 translocon complex encoded by the SEC61B gene. The Sec61 complex mediates the translocation of nascent polypeptides across and into the endoplasmic reticulum (ER) membrane, an essential step in the biosynthesis of secretory and membrane proteins. The SEC61B antibody enables precise detection of this translocon subunit and supports studies of protein targeting, membrane insertion, and ER homeostasis.

Protein transport protein Sec61 subunit beta forms part of the heterotrimeric Sec61 channel, together with the alpha (SEC61A) and gamma (SEC61G) subunits. While the alpha subunit forms the central pore that guides polypeptides through the membrane, the beta subunit participates in channel assembly, stability, and interaction with ribosomes and chaperones. The SEC61B antibody provides a reliable means of detecting this small yet essential component of the translocon, helping researchers understand how it contributes to co-translational protein translocation and membrane integration.

In addition to its structural role, Protein transport protein Sec61 subunit beta is involved in post-translational translocation of proteins and quality control mechanisms that prevent accumulation of misfolded peptides. The SEC61B antibody can be used to monitor ER function under stress conditions, including the unfolded protein response and ER-associated degradation (ERAD). By visualizing SEC61B distribution and expression levels, investigators gain insights into how protein import efficiency correlates with ER capacity and cell health.

The Sec61 complex also functions as a retrotranslocation channel, allowing misfolded proteins to exit the ER for cytosolic degradation by the proteasome. This dual functionality links SEC61B to cellular proteostasis and stress adaptation. The SEC61B antibody is instrumental in exploring these mechanisms and clarifying how perturbations in Sec61 function contribute to diseases such as cystic fibrosis, diabetes, and neurodegeneration. Its detection of Protein transport protein Sec61 subunit beta expression enables both basic and translational research on ER transport regulation.

The SEC61B antibody is suitable for western blotting, immunofluorescence, and immunohistochemistry. It produces distinct ER localization patterns consistent with translocon distribution. NSJ Bioreagents supplies this antibody as a rigorously tested reagent designed for reproducibility across experimental systems. By providing dependable detection of Protein transport protein Sec61 subunit beta, the SEC61B antibody supports molecular research into secretory pathway dynamics, protein biogenesis, and ER function in normal and disease states.

Application Notes

Optimal dilution of the SEC61B antibody should be determined by the researcher.

Immunogen

E.coli-derived human SEC61B recombinant protein (Position: R16-S96) was used as the immunogen for the SEC61B antibody.

Storage

After reconstitution, the SEC61B antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.