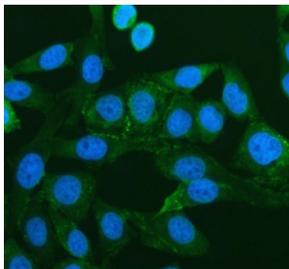


PEX16 Antibody / Peroxisomal biogenesis factor 16 (FY13456)

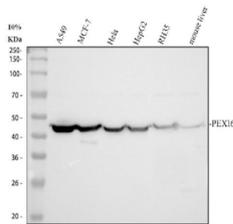
Catalog No.	Formulation	Size
FY13456	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

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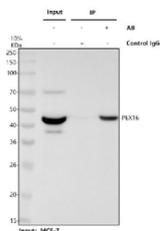
Availability	1-2 days
Species Reactivity	Human, Mouse, Rat
Format	Lyophilized
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl and 0.2 mg Na ₂ HPO ₄ .
UniProt	Q9Y5Y5
Localization	Peroxisome
Applications	Western Blot : 0.25-0.5ug/ml Immunoprecipitation : 2ug per 500ug of lysate Immunofluorescence : 5ug/ml
Limitations	This PEX16 antibody is available for research use only.



Immunofluorescence analysis of Peroxisomal biogenesis factor 16 using PEX16 antibody. PEX16 expression was examined in cultured human HeLa cells. Enzymatic antigen retrieval was performed prior to staining. Cells were blocked with normal goat serum and incubated with PEX16 antibody (green) overnight at 4C. Immunoreactivity shows a cytoplasmic staining pattern with punctate distribution consistent with peroxisomal membranes, and nuclei were counterstained with DAPI (blue).



Western blot analysis of PEX16 using PEX16 antibody. Protein lysates from human A549 cells (Lane 1), human MCF-7 cells (Lane 2), human HeLa cells (Lane 3), human HepG2 cells (Lane 4), rat RH35 cells (Lane 5) and mouse liver tissue (Lane 6) were resolved by SDS-PAGE under reducing conditions and transferred to a nitrocellulose membrane. PEX16 was detected as a band migrating at approximately 42 kDa, slightly above the predicted molecular weight of approximately 39 kDa for Peroxisomal biogenesis factor 16, consistent with modest anomalous migration commonly observed for peroxisomal membrane-associated proteins. Detection was performed using an HRP-based secondary antibody and chemiluminescent substrate.



Immunoprecipitation and western blot analysis of PEX16 using PEX16 antibody. PEX16 was immunoprecipitated from human MCF-7 whole cell lysates and analyzed by SDS-PAGE followed by immunoblotting. Lane 1 shows human MCF-7 whole cell lysate input, Lane 2 shows immunoprecipitation performed using rabbit control IgG, and Lane 3 shows immunoprecipitation performed using PEX16 antibody. PEX16 was detected as a band migrating at approximately 42 kDa, slightly above the predicted molecular weight of approximately 39 kDa for Peroxisomal biogenesis factor 16. Detection was performed using an HRP-based secondary antibody and chemiluminescent substrate.

Description

PEX16 antibody targets Peroxisomal biogenesis factor 16, encoded by the PEX16 gene. Peroxisomal biogenesis factor 16 is a peroxisomal membrane protein that plays a key role in early stages of peroxisome membrane formation and maintenance. Unlike shuttling import receptors, PEX16 functions as a membrane-associated organizer that contributes to the establishment and stabilization of peroxisomal membranes.

Functionally, Peroxisomal biogenesis factor 16 participates in the recruitment and insertion of other peroxisomal membrane proteins, supporting the assembly of functional peroxisomes. It has been implicated in coordinating peroxisome membrane biogenesis from pre-existing peroxisomes or precursor membrane structures. A PEX16 antibody supports studies focused on peroxisome membrane formation, organelle biogenesis, and intracellular membrane trafficking.

PEX16 is predominantly localized to peroxisomal membranes, consistent with its role as a structural and organizational component rather than a transport receptor. Its membrane-associated distribution distinguishes it from matrix protein import receptors and reflects its involvement in shaping peroxisomal architecture. Through this role, Peroxisomal biogenesis factor 16 contributes indirectly to peroxisome-dependent metabolic processes, including lipid metabolism and reactive oxygen species regulation.

From a disease-related perspective, disruption of PEX16 function impairs peroxisome formation and has been linked to peroxisome biogenesis disorders. Loss of functional PEX16 compromises peroxisomal membrane integrity and downstream metabolic capacity, highlighting its importance in organelle development and cellular homeostasis. These findings make PEX16 a relevant target for studies of inherited metabolic disease and organelle dysfunction.

At the molecular level, Peroxisomal biogenesis factor 16 contains conserved membrane-associated regions that support its localization and interactions with other peroxins. Its apparent behavior in biochemical assays reflects its membrane-embedded nature rather than changes in protein structure or processing. PEX16 antibody reagents enable investigation of peroxisomal membrane biogenesis and organelle assembly, with NSJ Bioreagents providing reagents intended for research use.

Application Notes

Optimal dilution of the PEX16 antibody should be determined by the researcher.

Immunogen

A synthetic peptide corresponding to a sequence at the N-terminus of human Peroxisomal biogenesis factor 16 was used as the immunogen for the PEX16 antibody.

Storage

After reconstitution, the PEX16 antibody can be stored for up to one month at 4°C. For long-term, aliquot and store at -20°C. Avoid repeated freezing and thawing.