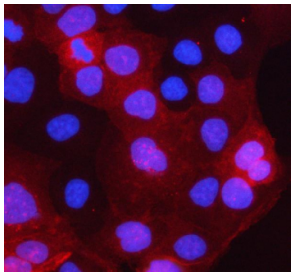
STARD10 Antibody / StAR-related lipid transfer protein 10 / PCTP-L (FY12990)

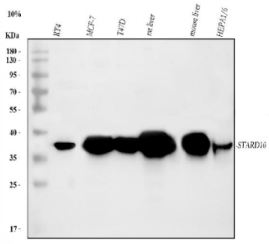
Catalog No.	Formulation	Size
FY12990	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

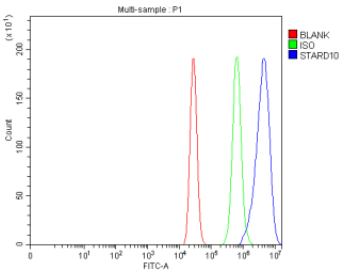
Availability	1-2 days
Species Reactivity	Human, Mouse, Rat
Format	Lyophilized
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	Q9Y365
Localization	Cytoplasm
Applications	ELISA : 0.1-0.5ug/ml Flow Cytometry : 1-3ug/million cells Immunofluorescence : 5ug/ml Immunocytochemistry : 5ug/ml Western Blot : 0.25-0.5ug/ml
Limitations	This STARD10 antibody is available for research use only.



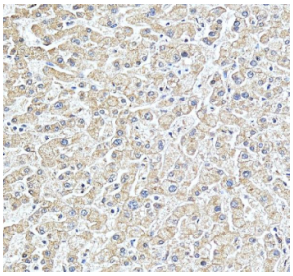
Immunofluorescent staining of STARD10 using anti-STARD10 antibody (red). STARD10 was detected in an immunocytochemical section of CACO-2 cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5 ug/ml rabbit anti-STARD10 antibody overnight at 4oC. Cy3 Conjugated Goat Anti-Rabbit IgG was used as secondary antibody at 1:500 dilution and incubated for 30 minutes at 37oC. The section was counterstained with DAPI nuclear stain (blue). Visualize using a fluorescence microscope and filter sets appropriate for the label used.



Western blot analysis of STARD10 using anti-STARD10 antibody. Lane 1: human RT4 whole cell lysates, Lane 2: human MCF-7 whole cell lysates, Lane 3: human T47D whole cell lysates, Lane 4: rat liver tissue lysates, Lane 5: mouse liver tissue lysates, Lane 6: mouse HEPA1-6 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-STARD10 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. Although the theoretical mass is ~33 kDa, STARD10 typically migrates at ~35-38 kDa on SDS-PAGE, consistent with reported behavior of START-domain proteins and minor post-translational modifications.



Flow Cytometry analysis of MCF-7 cells using anti-STARD10 antibody. Overlay histogram showing MCF-7 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-STARD10 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 (Red line) was also used as a control.



Immunohistochemical staining of STARD10 using anti-STARD10 antibody. STARD10 was detected in a paraffin-embedded section of human liver tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-STARD10 antibody overnight at 4oC. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37oC. The tissue section was developed using an HRP secondary and DAB substrate.

Description

STARD10 antibody detects StAR-related lipid transfer protein 10, a cytosolic lipid-binding protein that regulates intracellular lipid trafficking and membrane composition. The UniProt recommended name is StAR-related lipid transfer protein 10 (STARD10). This protein belongs to the START domain-containing family, which mediates non-vesicular lipid transfer between organelles and participates in lipid metabolism and signaling.

Functionally, STARD10 antibody identifies a 329-amino-acid protein that binds phosphatidylcholine, phosphatidylethanolamine, and other phospholipids through its conserved steroidogenic acute regulatory-related lipid transfer (START) domain. STARD10 facilitates the exchange and transport of phospholipids between membranes, ensuring proper lipid composition of the Golgi apparatus, plasma membrane, and endoplasmic reticulum. It plays important roles in membrane biogenesis, vesicle formation, and signal transduction.

The STARD10 gene is located on chromosome 11q13.1 and is expressed in multiple tissues, including pancreas, liver, and brain. In pancreatic beta cells, STARD10 modulates insulin secretion by regulating lipid signaling and granule membrane dynamics. Genetic studies have linked STARD10 variants to type 2 diabetes susceptibility, indicating its role in glucose metabolism and endocrine function. Its expression is also responsive to cellular lipid levels and nutrient signaling pathways, suggesting involvement in metabolic adaptation.

In lipid metabolism, STARD10 contributes to maintaining phospholipid asymmetry and membrane curvature. It interacts with small GTPases and cytoskeletal components to regulate vesicle trafficking. Dysregulation of STARD10 affects lipid homeostasis and has been associated with metabolic disorders and cancer. Elevated STARD10 expression has been

observed in breast and pancreatic cancers, where it may influence membrane signaling and cell proliferation.

STARD10 antibody is widely used in cell biology, metabolism, and endocrinology research. It is suitable for immunoblotting, immunofluorescence, and lipid transport assays to study protein localization and lipid-binding activity. Detection of STARD10 aids in exploring lipid trafficking pathways and their impact on cellular signaling. In disease models, STARD10 antibody supports studies on insulin secretion, metabolic regulation, and tumor lipid metabolism.

Structurally, STARD10 consists of a single START domain forming a hydrophobic binding pocket that accommodates phospholipid molecules. Post-translational modifications such as phosphorylation and acetylation regulate its lipid affinity and subcellular localization. NSJ Bioreagents provides STARD10 antibody reagents validated for use in lipid metabolism, membrane biology, and metabolic disease research.

Application Notes

Optimal dilution of the STARD10 antibody should be determined by the researcher.

Immunogen

E.coli-derived human PCTP-L/STARD10 recombinant protein (Position: M1-E273) was used as the immunogen for the STARD10 antibody.

Storage

After reconstitution, the STARD10 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.