SLC27A2 Antibody / FATP2 (FY12876)

Catalog No.	Formulation	Size
FY12876	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
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	O14975
Applications	Western Blot : 0.25-0.5ug/ml Immunohistochemistry : 2-5ug/ml Flow Cytometry : 1-3ug/million cells ELISA : 0.1-0.5ug/ml
Limitations	This SLC27A2 antibody is available for research use only.

Description

SLC27A2 antibody detects Long-chain fatty acid transport protein 2 (FATP2), an enzyme and transporter that mediates cellular uptake and activation of long-chain and very-long-chain fatty acids. Encoded by the SLC27A2 gene on chromosome 15q21.2, this bifunctional protein possesses both acyl-CoA synthetase and membrane transporter activity, coupling fatty acid import with activation into acyl-CoA thioesters. FATP2 plays a central role in lipid metabolism, peroxisomal beta-oxidation, and energy balance.

Structurally, FATP2 is an integral membrane protein of approximately 70 kilodaltons containing an AMP-binding domain and a transmembrane domain that anchors it to the endoplasmic reticulum and peroxisomal membranes. By simultaneously transporting and esterifying fatty acids, FATP2 ensures efficient channeling of lipids into metabolic and anabolic pathways. It exhibits substrate preference for long-chain and polyunsaturated fatty acids, regulating lipid composition in liver and kidney tissues where it is abundantly expressed.

The SLC27A2 antibody is widely used in lipid metabolism, endocrinology, and mitochondrial research to study fatty acid transport, oxidation, and storage. Western blot analysis detects a 70 kilodalton band corresponding to FATP2, while

immunofluorescence reveals peroxisomal and ER-associated staining. This antibody is an essential reagent for investigating lipid homeostasis and the mechanisms linking fatty acid uptake to metabolic regulation.

FATP2 expression is upregulated in metabolic and inflammatory conditions, including nonalcoholic fatty liver disease and insulin resistance. Its deficiency disrupts fatty acid activation and leads to altered lipid accumulation, oxidative stress, and impaired peroxisomal function. In cancer cells, FATP2 supports rapid proliferation by promoting fatty acid uptake and lipid synthesis, making it a potential therapeutic target in metabolic oncology. The SLC27A2 antibody provides a reliable tool for detecting FATP2 expression, studying fatty acid channeling, and evaluating its role in disease-associated metabolic remodeling. NSJ Bioreagents validates this antibody for western blotting, immunohistochemistry, and immunofluorescence, ensuring accurate and reproducible results for lipid and peroxisomal research.

Application Notes

Optimal dilution of the SLC27A2 antibody should be determined by the researcher.

Immunogen

E.coli-derived human FATP2/SLC27A2 recombinant protein (Position: F27-D608) was used as the immunogen for the SLC27A2 antibody.

Storage

After reconstitution, the SLC27A2 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.