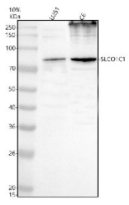
SLCO1C1 Antibody / Solute carrier organic anion transporter family member 1C1 / OATP14 (FY12933)

Catalog No.	Formulation	Size
FY12933	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, 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	Q9NYB5
Applications	Western Blot: 0.25-0.5ug/ml ELISA: 0.1-0.5ug/ml
Limitations	This SLCO1C1 antibody is available for research use only.



Western blot analysis of SLCO1C1 using anti-SLCO1C1 antibody. Electrophoresis was performed on a 10% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. Lane 1: human U251 whole cell lysates, Lane 2: rat C6 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-SLCO1C1 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 main band at ~79 kDa is detected as expected, with an additional ~250 kDa species in C6 lysate. The higher band is consistent with glycosylated, disulfide-linked oligomers or aggregation-resistant complexes of this multi-pass transporter, a behavior commonly reported for OATP family proteins.

Description

SLCO1C1 antibody detects solute carrier organic anion transporter family member 1C1, also known as OATP14, a transporter responsible for the uptake of thyroid hormones and other organic anions across cellular membranes. The UniProt recommended name is Solute carrier organic anion transporter family member 1C1 (SLCO1C1), with alternate names organic-anion-transporting polypeptide 1C1, OATP-F, OATP14, and OATPF. SLCO1C1 is primarily expressed at the blood-brain barrier and the choroid plexus, where it mediates the high-affinity transport of thyroxine (T4) and reverse triiodothyronine (rT3), supporting central nervous system homeostasis.

Functionally, SLCO1C1 antibody targets a transmembrane glycoprotein belonging to the solute carrier (SLC) superfamily, subfamily SLCO, which facilitates sodium-independent transport of amphipathic organic compounds including hormones, bile acids, and drugs. In the brain, SLCO1C1 is essential for delivering thyroid hormones necessary for neuronal differentiation and metabolism. Loss of SLCO1C1 function or genetic variants reduce T4 influx into the brain, contributing to thyroid hormone deficiency and impaired neurological development. Beyond the brain, SLCO1C1 transcripts have been detected in the testis, placenta, and endothelial cells, suggesting broader roles in hormone clearance and intercellular signaling.

Researchers use SLCO1C1 antibody in western blotting, immunofluorescence, and immunohistochemistry to assess expression at the blood-brain barrier and study its regulation under disease or drug-induced conditions. SLCO1C1 expression is regulated by nuclear receptors such as PXR, LXR, and HNF4alpha, integrating endocrine and metabolic cues. Polymorphisms in SLCO1C1 affect pharmacokinetics of thyroid hormone analogs and certain drugs, making it a pharmacogenomic biomarker for personalized medicine approaches. The protein contains 12 predicted transmembrane domains typical of OATP transporters, with glycosylation sites important for proper folding and localization.

The SLCO1C1 gene is located on chromosome 12p12.1 and encodes a protein of about 643 amino acids. It shares structural similarity with other OATP family members such as SLCO1A2, SLCO1B1, and SLCO1B3, but exhibits unique tissue distribution and substrate specificity. Functional studies reveal that SLCO1C1 contributes significantly to the transport of T4 and rT3 across endothelial cells, maintaining thyroid hormone gradients crucial for neuronal activity. Dysfunction in SLCO1C1 expression has been implicated in neurodevelopmental delay, cognitive impairment, and altered drug disposition in the CNS.

By enabling precise detection of this transporter, the SLCO1C1 antibody is a critical reagent for understanding thyroid hormone transport, blood-brain barrier permeability, and transporter-mediated drug delivery. NSJ Bioreagents supplies validated antibodies that provide reliable detection in human, mouse, and rat tissues for translational research applications.

Application Notes

Optimal dilution of the SLCO1C1 antibody should be determined by the researcher.

Immunogen

E.coli-derived human OATP14/SLCO1C1 recombinant protein (Position: M1-L712) was used as the immunogen for the SLCO1C1 antibody.

Storage

After reconstitution, the SLCO1C1 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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