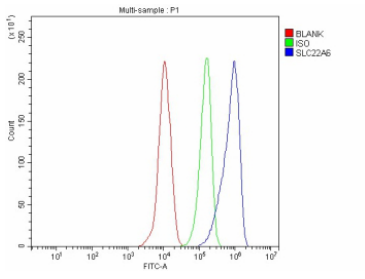
OAT1 Antibody / Organic anion transporter 1 / SLC22A6 (FY12610)

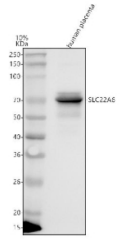
Catalog No.	Formulation	Size
FY12610	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

Availability	1-2 days
Species Reactivity	Human
Format	Lyophilized
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	Q4U2R8
Applications	ELISA: 0.1-0.5ug/ml Flow cytometry: 1-3ug/million cells Western Blot: 0.25-0.5ug/ml
Limitations	This OAT1 antibody is available for research use only.



Flow Cytometry analysis of THP-1 cells using anti-OAT1 antibody. Overlay histogram showing THP-1 cells stained with (Blue line). The cells were fixed with 4% paraformaldehyde and blocked with 10% normal goat serum. And then incubated with rabbit anti-OAT1 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 OAT1/SLC22A6 using anti-OAT1 antibody. Lane 1: human placenta tissue 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-OAT1 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. Western blot probed with anti-SLC22A6 (OAT1) shows a main band at ~70 kDa, higher than the predicted ~62 kDa, consistent with the mature N-glycosylated transporter. Additional higher and lower bands represent different glycosylation states of OAT1.

Description

OAT1 antibody detects Organic anion transporter 1, a renal membrane transporter responsible for the uptake of a wide range of endogenous metabolites and xenobiotics. OAT1 plays a vital role in drug excretion, toxin clearance, and metabolic waste handling. The OAT1 antibody is used in nephrology, pharmacology, and toxicology research to study renal secretion, drug-drug interactions, and kidney function.

OAT1 is encoded by the SLC22A6 gene located on human chromosome 11q12.3. The protein is approximately 563 amino acids long and belongs to the solute carrier 22 family. OAT1 is expressed predominantly in the basolateral membrane of renal proximal tubule cells, where it mediates the uptake of organic anions from the bloodstream into tubular cells, enabling their secretion into urine via apical transporters.

The OAT1 antibody detects a 60 kilodalton band by western blot and shows basolateral membrane staining in kidney tissue sections. OAT1 transports metabolites such as urate, prostaglandins, and p-aminohippurate, as well as drugs including antivirals, diuretics, and antibiotics. Its activity depends on the transmembrane exchange of alpha-ketoglutarate, coupling organic anion uptake to cellular metabolism.

Because OAT1 handles many pharmaceuticals, it is a major determinant of drug pharmacokinetics and toxicity. Inhibition or saturation of OAT1 can lead to altered drug clearance and nephrotoxicity. Genetic polymorphisms in OAT1 affect drug response variability and susceptibility to renal injury. Beyond renal physiology, OAT1 contributes to organic acid homeostasis in the brain and choroid plexus.

By regulating solute movement between blood and urine, OAT1 maintains chemical balance and metabolic detoxification. NSJ Bioreagents provides a validated OAT1 antibody optimized for its applications, supporting research into kidney physiology, drug metabolism, and transporter-mediated toxicity.

Application Notes

Optimal dilution of the OAT1 antibody should be determined by the researcher.

Immunogen

E.coli-derived human OAT1/SLC22A6 recombinant protein (Position: R286-L563) was used as the immunogen for the OAT1 antibody.

Storage

After reconstitution, the OAT1 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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