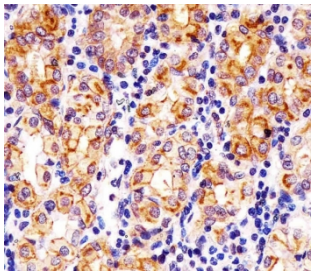
OCT2 / SLC22A2 Antibody (F54507)

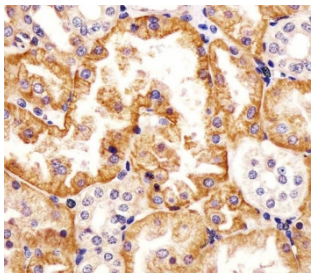
Catalog No.	Formulation	Size
F54507-0.2ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.2 ml
F54507-0.05ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.05 ml

Bulk quote request

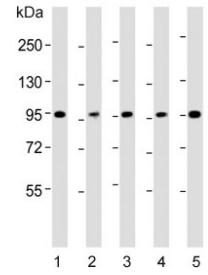
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Purity	Antigen affinity purified
UniProt	O15244
Applications	Western blot: 1:500-1:2000 Immunohistochemistry (FFPE): 1:25 Flow cytometry: 1:25 (1x10e6 cells)
Limitations	This OCT2 / SLC22A2 Antibody is available for research use only.



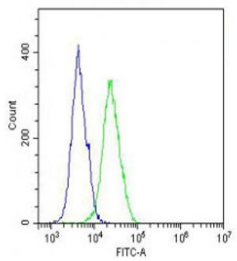
IHC testing of FFPE human stomach tissue with OCT2 / SLC22A2 Antibody. HIER: steam section in pH6 citrate buffer for 20 min and allow to cool prior to staining.



IHC testing of FFPE human kidney tissue with OCT2 / SLC22A2 Antibody. HIER: steam section in pH6 citrate buffer for 20 min and allow to cool prior to staining.



Western blot testing of human 1) HEK293, 2) A431, 3) HepG2, 4) Jurkat and 5) Raji cell lysate with OCT2 / SLC22A2 Antibody. Expected molecular weight: 55-100 kDa depending on glycosylation level.



Flow cytometry testing of fixed and permeabilized human A431 cells with OCT2 / SLC22A2 Antibody; Blue=isotype control, Green= OCT2 / SLC22A2 Antibody.

Description

OCT2 / SLC22A2 Antibody recognizes Organic Cation Transporter 2 (OCT2), also known as Solute Carrier Family 22 Member 2 (SLC22A2), a polyspecific membrane transporter responsible for the uptake of a broad range of endogenous organic cations, xenobiotics, and clinically important therapeutic drugs. OCT2 is a member of the solute carrier family 22 (SLC22) transporter family and functions primarily as a sodium-independent transporter within the kidney. By mediating the movement of positively charged compounds across the plasma membrane, OCT2 plays an essential role in renal drug disposition, metabolite handling, and maintenance of systemic homeostasis. Consequently, OCT2 / SLC22A2 Antibody is widely used to investigate renal transporter biology, pharmacokinetics, and drug-transporter interactions.

OCT2 is expressed predominantly on the basolateral membrane of proximal tubular epithelial cells in the kidney, where it mediates the uptake of circulating organic cations from the bloodstream into renal epithelial cells before their secretion into urine. The transporter recognizes numerous physiological substrates, including creatinine, choline, dopamine, and thiamine, as well as many therapeutic agents such as metformin, cisplatin, antivirals, and cardiovascular drugs. Genetic polymorphisms and altered OCT2 expression can significantly influence drug efficacy, clearance, and susceptibility to adverse drug reactions, making OCT2 an important focus of pharmacogenomic research.

Beyond normal renal physiology, OCT2 has become increasingly important in studies of nephrotoxicity and drug development. Uptake of nephrotoxic compounds through OCT2 contributes to renal injury induced by several chemotherapeutic agents, while inhibition of transporter activity may reduce kidney toxicity without compromising therapeutic efficacy. Altered SLC22A2 expression has also been associated with chronic kidney disease and has been investigated in several malignancies. As a result, OCT2 is routinely evaluated during pharmaceutical development to characterize transporter-mediated drug interactions and predict renal clearance of candidate compounds.

NSJ Bioreagents offers highly validated OCT2 / SLC22A2 Antibody products for reliable detection of endogenous OCT2 in human and animal tissues. These antibodies support investigations into renal physiology, membrane transporter biology, pharmacology, drug metabolism, transporter-mediated toxicity, and kidney disease while enabling accurate characterization of OCT2 expression and localization. Researchers studying renal organic cation transport and drug disposition can rely on OCT2 / SLC22A2 Antibody for dependable and reproducible results.

Learn more about the role of SLC22A2 in organic cation transport, renal drug disposition and xenobiotic clearance on our SLC22A2 Antibody / Organic Cation Transporter Antibody page.

Application Notes

The stated application concentrations are suggested starting points. Titration of the OCT2 / SLC22A2 Antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

Recombinant human protein was used as the immunogen for the OCT2 / SLC22A2 Antibody.

Storage

Aliquot the OCT2 / SLC22A2 Antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

Alternate Names

SLC22A2 antibody, Organic Cation Transporter 2 antibody, Solute Carrier Family 22 Member 2 antibody, Renal Organic Cation Transporter antibody, Organic Cation Transport Protein 2 antibody, Kidney Organic Cation Transporter antibody

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