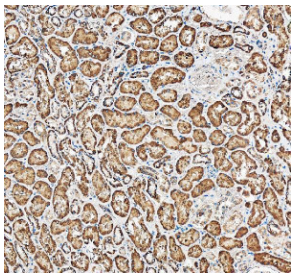
MCT5 Antibody / Monocarboxylate Transporter 5 Antibody (R31311)

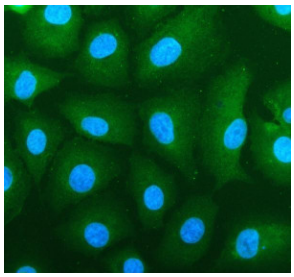
Catalog No.	Formulation	Size
R31311	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

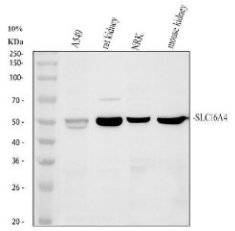
Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	O15374
Applications	Western blot: 0.5-1ug/ml Immunohistochemistry (FFPE): 2-5ug/ml Immunofluorescence: 5ug/ml
Limitations	This MCT5 Antibody / Monocarboxylate Transporter 5 Antibody is available for research use only.



MCT5 Antibody Human Kidney IHC. Immunohistochemistry analysis of FFPE human kidney tissue using MCT5 Antibody. Heat induced epitope retrieval was performed in pH 8.0 EDTA buffer prior to overnight incubation with primary antibody (2 ug/mL). HRP detection with DAB chromogen was used for visualization. Strong membranous and cytoplasmic staining is observed throughout renal tubular epithelial cells, consistent with the expected expression pattern of MCT5 (SLC16A4), a proton-coupled monocarboxylate transporter involved in epithelial metabolite transport. These results support the use of MCT5 Antibody / Monocarboxylate Transporter 5 Antibody for studying MCT5 expression, SLC16A4 biology and monocarboxylate transport.



MCT5 Antibody Human Lung Cell IF. Immunofluorescence analysis of A549 cells using MCT5 Antibody (5 ug/mL). Cells were subjected to enzyme-mediated antigen retrieval, incubated overnight with primary antibody, and detected with a Fluoro488-conjugated secondary antibody (green). Nuclei were counterstained with DAPI (blue). MCT5 staining is distributed throughout the cytoplasm with enrichment along the plasma membrane, consistent with the expected localization of the SLC16A4 monocarboxylate transporter. These results support the use of MCT5 Antibody / Monocarboxylate Transporter 5 Antibody for studying MCT5 expression, SLC16A4 biology and epithelial monocarboxylate transport.



MCT5 Antibody Human, Rat and Mouse Kidney WB. Western blot analysis using MCT5 Antibody. Lane 1: human A549 cells; Lane 2: rat kidney tissue lysate; Lane 3: rat NRK cells; Lane 4: mouse kidney tissue lysate. A specific band is detected at approximately 54 kDa in all samples, consistent with the expected molecular weight of MCT5 (SLC16A4). Detection in both rodent kidney tissues and cultured epithelial cell lines supports the conserved expression of this proton-coupled monocarboxylate transporter across species. These results support the use of MCT5 Antibody / Monocarboxylate Transporter 5 Antibody for studying MCT5 expression, SLC16A4 biology and monocarboxylate transport.

Description

MCT5 Antibody / Monocarboxylate Transporter 5 Antibody detects MCT5, also known as SLC16A4, a member of the solute carrier family 16 of proton-coupled monocarboxylate transporters. The MCT family mediates the transport of metabolites such as lactate, pyruvate and other monocarboxylates across cellular membranes, thereby contributing to metabolic homeostasis and intracellular pH regulation. Although the physiological substrate specificity of MCT5 remains less well characterized than other family members, accumulating evidence indicates that it plays an important role in epithelial metabolism and cellular transport processes. MCT5 Antibody / Monocarboxylate Transporter 5 Antibody is a valuable tool for investigating transporter biology and metabolic regulation.

MCT5 is expressed primarily in epithelial tissues, including the gastrointestinal tract and kidney, where coordinated transport of monocarboxylates supports nutrient utilization and metabolic adaptation. Like other members of the SLC16 family, MCT5 is predicted to contain twelve transmembrane domains that facilitate proton-linked transport across the plasma membrane. While transport characteristics continue to be investigated, structural similarities to other monocarboxylate transporters suggest an important role in maintaining cellular energy balance and regulating metabolite exchange between cells and their microenvironment. MCT5 Antibody / Monocarboxylate Transporter 5 Antibody enables researchers to examine expression patterns and tissue localization of this understudied transporter.

Interest in MCT5 has expanded as metabolic reprogramming has emerged as a hallmark of cancer and other diseases. Altered expression of monocarboxylate transporters can influence intracellular metabolite availability, extracellular acidification and cellular adaptation to changing metabolic demands. Although MCT1 and MCT4 have received the greatest attention, increasing research is exploring the contribution of MCT5 to epithelial physiology, gastrointestinal function and metabolic disorders. Characterizing MCT5 expression may therefore provide valuable insight into transporter family biology and reveal previously unrecognized mechanisms of metabolic regulation.

Beyond metabolism, MCT5 contributes to broader investigations of membrane transport, epithelial differentiation and tissue-specific physiology. Comparative studies of SLC16 family members continue to improve understanding of transporter evolution, substrate specificity and coordinated regulation of metabolic pathways. As additional functional studies emerge, MCT5 is expected to become increasingly relevant in investigations of nutrient transport, epithelial homeostasis and disease-associated metabolic alterations.

NSJ Bioreagents offers MCT5 Antibody / Monocarboxylate Transporter 5 Antibody products for researchers studying SLC16 family transporters, epithelial biology and cellular metabolism. These antibodies support applications including

Western blot, immunohistochemistry, immunofluorescence, immunoprecipitation and flow cytometry for analysis of MCT5 expression and localization. MCT5 Antibody / Monocarboxylate Transporter 5 Antibody provides a reliable tool for investigating SLC16A4 biology, monocarboxylate transport and metabolic regulation.

Researchers studying cellular metabolism, membrane transport and metabolic signaling may also be interested in our Metabolism Antibodies page, featuring antibodies against transporters, metabolic enzymes and other proteins involved in energy homeostasis and nutrient utilization.

Application Notes

The stated application concentrations are suggested starting amounts. Titration of the MCT5 Antibody / Monocarboxylate Transporter 5 Antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

An amino acid sequence from the N-terminus of human Monocarboxylate transporter 5 (VVTTKYFKKRLALST) was used as the immunogen for this MCT5 antibody.

Storage

After reconstitution, the MCT5 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Alternate Names

Monocarboxylate Transporter 5 antibody, SLC16A4 antibody, Solute Carrier Family 16 Member 4 antibody, Monocarboxylate Transport Protein 5 antibody, MCT 5 antibody, Proton-Coupled Monocarboxylate Transporter 5 antibody

Copyright © NSJ Bioreagents. All rights reserved.