abcam

ab124826

Anti-SLC22A3/OCT3 antibody [EPR6630]

Recombinant | RabMAb | 20ul selling size

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.05% Sodium azide Constituents: 50% Tissue culture supernatant, 40% Glycerol (glycerin, glycerine), 9.85% Tris glycine
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR6630
Purification technique	Affinity purification Protein A
Specificity	We recommend using un-boiled sample to run WB tests. This antibody was found to have cross reactivity with SLC22A2 family member.
Dissociation constant	4.75×10^{-11} M
Concentration	0.102 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Human

Dilution info	1/100 - 1/250
Notes	-

IP

Not recommended

Species	Human
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	1/10000 - 1/50000
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/100
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Target data

See full target information SLC22A3

Function Electrogenic voltage-dependent transporter that mediates the transport of a variety of organic cations such as endogenous bioactive amines, cationic drugs and xenobiotics (PubMed:10196521, PubMed:10966924, PubMed:12538837, PubMed:17460754, PubMed:20858707). Cation cellular uptake or release is driven by the electrochemical potential, i.e. membrane potential and concentration gradient (PubMed:10966924). Functions as a Na(+)- and Cl(-)-independent, bidirectional uniporter (PubMed:12538837). Implicated in monoamine neurotransmitters uptake such as dopamine, adrenaline/epinephrine, noradrenaline/norepinephrine, histamine, serotonin and tyramine, thereby

supporting a role in homeostatic regulation of aminergic neurotransmission in the brain (PubMed:10196521, PubMed:16581093, PubMed:20858707). Transports dopaminergic neuromodulators cyclo(his-pro) and salsolinol with low efficiency (PubMed:17460754). May be involved in the uptake and disposition of cationic compounds by renal clearance from the blood flow (PubMed:10966924). May contribute to regulate the transport of cationic compounds in testis across the blood-testis-barrier (Probable). Mediates the transport of polyamine spermidine and putrescine (By similarity). Mediates the bidirectional transport of polyamine agmatine (PubMed:12538837). Also transports guanidine (PubMed:10966924). May also mediate intracellular transport of organic cations, thereby playing a role in amine metabolism and intracellular signaling (By similarity).

Storage

Shipped at conditions	Conditional Ambient
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Storage information	Stable for 12 months at -20°C

Notes

Species reactivity
Mouse, Rat: We have preliminary internal testing data to indicate this antibody may not react with these species. Please contact us for more information.

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	The SLC22A3 protein also known as OCT3 or organic cation transporter 3 is involved in the transport of organic cations across cell membranes. It functions as a polyspecific transporter allowing it to transport a wide range of substrates including neurotransmitters and drugs. SLC22A3 has a molecular mass of approximately 61 kDa and is expressed in various tissues most notably in the brain heart and liver.
Biological function summary	SLC22A3 facilitates the uptake of monoamines such as dopamine and norepinephrine into cells influencing neurotransmitter signaling and metabolism. The protein is not part of a known complex but interacts with cellular transport mechanisms. The transport capabilities impact cellular uptake processes affecting cell signaling and homeostasis.
Pathways	SLC22A3 participates in neurotransmitter reuptake and drug metabolism pathways. Within these pathways it collaborates with transport proteins such as SLC6A4 which is responsible for serotonin uptake. SLC22A3's role in monoamine reuptake connects it to pathways regulating mood and cognitive function.
Associated diseases and disorders	SLC22A3 links to conditions such as depression and cardiovascular diseases. Variations in its gene expression or function influence susceptibility to these conditions. In depression SLC22A3 interacts with neurotransmitter systems shared with proteins like monoamine oxidase affecting mood regulation. In cardiovascular diseases SLC22A3's expression in the heart plays a part in transporting drugs and endogenous compounds potentially impacting disease progression.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

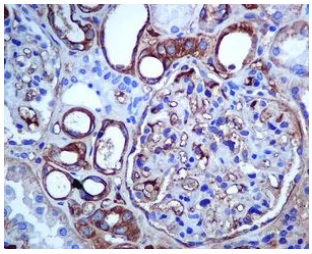
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:

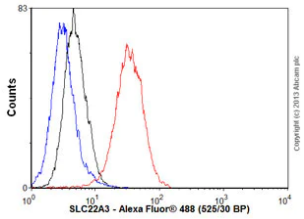
4 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SLC22A3/OCT3 antibody [EPR6630] (ab124826)

SLC22A3/OCT3 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-SLC22A3/OCT3 antibody

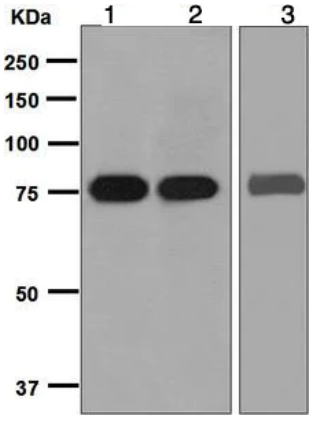
ab124826 at 1/100 dilution staining SLC22A3/OCT3 in paraffin-embedded Human kidney tissue by Immunohistochemistry.
Perform heat mediated antigen retrieval before commencing with IHC staining protocol.



Flow Cytometry (Intracellular) - Anti-SLC22A3/OCT3 antibody [EPR6630] (ab124826)

SLC22A3/OCT3 Flow Cytometry (Intracellular) staining using rabbit Anti-SLC22A3/OCT3 antibody

Overlay histogram showing JEG3 cells stained with ab124826 (red line). The cells were fixed with 80% methanol (5 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab124826 1/100 dilution) for 30 min at 22°C. The secondary antibody used was Alexa Fluor® 488 goat anti-rabbit IgG (H&L) (ab150077) at 1/2000 dilution for 30 min at 22°C. Isotype control antibody (black line) was rabbit IgG (monoclonal) (0.1µg/1x10^6 cells) used under the same conditions. Unlabelled sample (blue line) was also used as a control. Acquisition of >5000 events were collected using a 20mW Argon ion laser (488nm) and 525/30 bandpass filter.



Western blot - Anti-SLC22A3/OCT3 antibody [EPR6630] (ab124826)

SLC22A3/OCT3 Western blot staining using rabbit Anti-SLC22A3/OCT3 antibody

All lanes:
Western blot - Anti-SLC22A3/OCT3 antibody [EPR6630] (ab124826) at 1/10000 dilution

Lane 1:
Human fetal kidney tissue lysate at 10 µg

Lane 2:
Human muscle tissue lysate at 10 µg

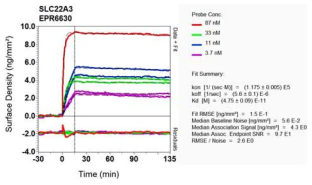
Lane 3:
Human placenta tissue lysate at 10 µg

Secondary

All lanes:
HRP labelled goat anti-rabbit at 1/2000 dilution

Predicted band size: 61 kDa

Observed band size: 80 kDa



OI-RD Scanning - Anti-SLC22A3/OCT3 antibody [EPR6630] (ab124826)

We have systematically measured KD (the equilibrium dissociation constant between the antibody and its antigen), of more than 840 recombinant antibodies to assess not only their individual KD values but also to see the average affinity of antibody. Based on the comparison with published literature values for mouse monoclonal antibodies, Recombinant antibodies appear to be on average 1-2 order of magnitude higher affinity.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.