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SLC38A3 Antibody (Center) Blocking Peptide
Synthetic peptide
Catalog # BP6819c

Specification

SLC38A3 Antibody (Center) Blocking Peptide - Product Information

Primary Accession Q99624

SLC38A3 Antibody (Center) Blocking Peptide - Additional Information

Gene ID 10991

Other Names
Sodium-coupled neutral amino acid transporter 3, N-system amino acid transporter 1, Na(+)-coupled neutral amino acid transporter 3, Solute carrier family 38 member 3, System N amino acid transporter 1, SLC38A3 {ECO:0000312|EMBL:AAH428751}

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP6819c was selected from the Center region of human SLC38A3. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

SLC38A3 Antibody (Center) Blocking Peptide - Protein Information

Name SLC38A3 {ECO:0000312|EMBL:AAH42875.1, ECO:0000312|MIM:604437}

Function
Symporter that cotransports specific neutral amino acids and sodium ions, coupled to an H(+) antiporter activity (PubMed:10823827). Mainly participates in the glutamate-GABA-glutamine cycle in brain where it transports L-glutamine from astrocytes in the intercellular space for the replenishment of both neurotransmitters glutamate and gamma-aminobutyric acid (GABA) in neurons and also functions as the major influx transporter in ganglion cells mediating the uptake of glutamine (By similarity). The transport activity is specific for L- glutamine, L-histidine and L-asparagine (PubMed:10823827). The transport is electroneutral coupled to the cotransport of 1 Na(+) and the antiport of 1 H(+) (By similarity). The transport is pH dependent, saturable, Li(+)

tolerant and functions in both direction depending on the concentration gradients of its substrates and cotransported ions (PubMed:10823827). Also mediates an amino acid-gated H(+) conductance that is not stoichiometrically coupled to the amino acid transport but which influences the ionic gradients that drive the amino acid transport (By similarity). In addition, may play a role in nitrogen metabolism, amino acid homeostasis, glucose metabolism and renal ammoniagenesis (By similarity).

Cellular Location
Cell membrane {ECO:0000250|UniProtKB:Q9DCP2}; Multi-pass membrane protein. Basolateral cell membrane {ECO:0000250|UniProtKB:Q9DCP2}. Note=The localization appears to be basolateral in the plasma membrane of hepatocytes surrounding the central vein. Localized at the cerebrospinal fluid (CSF)-facing membrane of the choroid plexus epithelial cells. In astrocytes, the localization at cell membrane is decreased by ammonia through the PKC signaling. Expressed in both luminal and abluminal plasma membranes of larger microvessels and blood brain barrier (BBB) capillaries (By similarity). Restricted to the basolateral membranes of S3 segment cells of the proximal tubules (By similarity) {ECO:0000250|UniProtKB:Q9DCP2, ECO:0000250|UniProtKB:Q9JHZ9}

SLC38A3 Antibody (Center) Blocking Peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Blocking Peptides

SLC38A3 Antibody (Center) Blocking Peptide - Images

SLC38A3 Antibody (Center) Blocking Peptide - Background

SLC38A3 is sodium-dependent amino acid/proton antiporter.It mediates electrogenic cotransport of glutamine and sodium ions in exchange for protons and also recognizes histidine, asparagine and alanine. This protein may mediate amino acid transport in either direction under physiological conditions. It may play a role in nitrogen metabolism and synaptic transmission.

SLC38A3 Antibody (Center) Blocking Peptide - References

Sidoryk,M., et.al., Neuroreport 15 (4), 575-578 (2004)