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SLC38A3 Antibody (Center)
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP6819c

Specification

SLC38A3 Antibody (Center) - Product Information

Application	**WB, FC,E**
Primary Accession	Q99624
Reactivity	**Human**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**55773**
Antigen Region	**442-468**

SLC38A3 Antibody (Center) - 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
This SLC38A3 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 442-468 amino acids from the Central region of human SLC38A3.

Dilution
WB~~1:1000
FC~~1:10~50

Format
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.

Storage
Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
SLC38A3 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

SLC38A3 Antibody (Center) - 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}

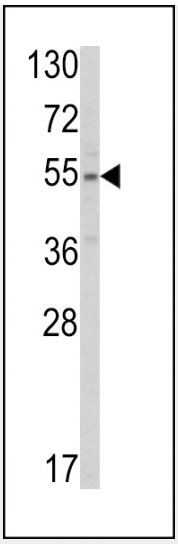
SLC38A3 Antibody (Center) - Protocols

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

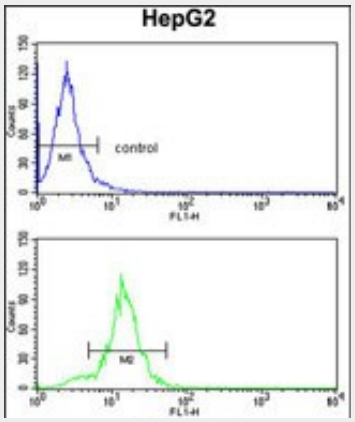
- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

SLC38A3 Antibody (Center) - Images

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Western blot analysis of SLC38A3 Antibody (Center) (Cat. #AP6819c) in HepG2 cell line lysates (35ug/lane). SLC38A3 (arrow) was detected using the purified Pab.



SLC38A3 Antibody (Center) (Cat.#AP6819c) flow cytometry analysis of HepG2 cells (bottom histogram) compared to a negative control cell (top histogram). FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

SLC38A3 Antibody (Center) - 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) - References

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