

**SLC38A1 Antibody (N-term) Blocking Peptide**  
**Synthetic peptide**  
**Catalog # BP16436a****Specification**

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**SLC38A1 Antibody (N-term) Blocking Peptide - Product Information**Primary Accession [Q9H2H9](#)**SLC38A1 Antibody (N-term) Blocking Peptide - Additional Information****Gene ID** 81539**Other Names**

Sodium-coupled neutral amino acid transporter 1, Amino acid transporter A1, N-system amino acid transporter 2, Solute carrier family 38 member 1, System A amino acid transporter 1, System N amino acid transporter 1, SLC38A1, ATA1, NAT2, SAT1, SNAT1

**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.

**SLC38A1 Antibody (N-term) Blocking Peptide - Protein Information****Name** SLC38A1**Function**

Symporter that cotransports short-chain neutral amino acids and sodium ions from the extracellular to the intracellular side of the cell membrane (PubMed:<a href="http://www.uniprot.org/citations/20599747" target="\_blank">20599747</a>, PubMed:<a href="http://www.uniprot.org/citations/10891391" target="\_blank">10891391</a>). The transport is electrogenic, pH dependent and driven by the Na(+) electrochemical gradient (PubMed:<a href="http://www.uniprot.org/citations/10891391" target="\_blank">10891391</a>). Participates in the astroglia-derived glutamine transport into GABAergic interneurons for neurotransmitter GABA de novo synthesis (By similarity). May also contribute to amino acid transport in placental trophoblasts (PubMed:<a href="http://www.uniprot.org/citations/20599747" target="\_blank">20599747</a>). Also regulates synaptic plasticity (PubMed:<a href="http://www.uniprot.org/citations/12388062" target="\_blank">12388062</a>).

**Cellular Location**

Cell membrane; Multi-pass membrane protein {ECO:0000250|UniProtKB:Q9JM15} Note=Restricted to the somatodendritic compartment of neurons. Found in the cellular processes of neurons in the developing brain {ECO:0000250|UniProtKB:Q9JM15}

**Tissue Location**

Expressed in the cerebral cortex by pyramidal and GABAergic neurons, astrocytes and other non-neuronal cells (at protein level). Expressed in placenta, heart, lung, skeletal muscle, spleen, stomach and testis (PubMed:10891391, PubMed:12388062, PubMed:15054072, PubMed:16148032). Highly expressed in cytotrophoblast cells from term placenta (PubMed:20599747).

**SLC38A1 Antibody (N-term) Blocking Peptide - Protocols**

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

- [Blocking Peptides](#)

**SLC38A1 Antibody (N-term) Blocking Peptide - Images****SLC38A1 Antibody (N-term) Blocking Peptide - Background**

Amino acid transporters play essential roles in the uptake of nutrients, production of energy, chemical metabolism, detoxification, and neurotransmitter cycling. SLC38A1 is an important transporter of glutamine, an intermediate in the detoxification of ammonia and the production of urea. Glutamine serves as a precursor for the synaptic transmitter, glutamate (Guet al., 2001 [PubMed 11325958]).

**SLC38A1 Antibody (N-term) Blocking Peptide - References**

Desforges, M., et al. Biochem. Biophys. Res. Commun. 398(1):130-134(2010) Rose, J.E., et al. Mol. Med. 16 (7-8), 247-253 (2010) :Kim, S., et al. Mol. Psychiatry (2010) In press :Ernst, C., et al. Neuroscience 162(2):415-422(2009) Potkin, S.G., et al. PLoS ONE 4 (8), E6501 (2009) :