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SLC38A1 / NaT2 Antibody (clone S104-32)

Mouse Monoclonal Antibody
Catalog # ALS15000

Specification

SLC38A1 / NaT2 Antibody (clone S104-32) - Product Information

Application	**IHC**
Primary Accession	Q9H2H9
Reactivity	**Human, Mouse, Rat**
Host	**Mouse**
Clonality	**Monoclonal**
Calculated MW	**54kDa KDa**

SLC38A1 / NaT2 Antibody (clone S104-32) - 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

Target/Specificity
Detects ~50kDa.

Reconstitution & Storage
Short term 4°C, long term aliquot and store at -20°C, avoid freeze thaw cycles.

Precautions
SLC38A1 / NaT2 Antibody (clone S104-32) is for research use only and not for use in diagnostic or therapeutic procedures.

SLC38A1 / NaT2 Antibody (clone S104-32) - Protein Information

Name SLC38A1

Function
Symporter that cotransports short-chain neutral amino acids and sodium ions from the extraccellular to the intracellular side of the cell membrane (PubMed:20599747, PubMed:10891391). The transport is elctrogenic, pH dependent and driven by the Na(+) electrochemical gradient (PubMed:10891391). Participates in the astroglia-derived glutamine transport into GABAergic interneurons for neurotransmitter GABA de novo synthesis (By similarity). May also contributes to amino acid transport in placental trophoblasts (PubMed:20599747). Also regulates synaptic plasticity (PubMed:12388062).

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).

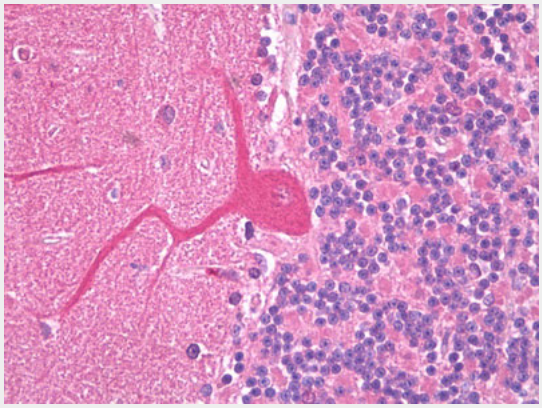
Volume
50 µl

SLC38A1 / NaT2 Antibody (clone S104-32) - 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

SLC38A1 / NaT2 Antibody (clone S104-32) - Images



Anti-SLC38A1 antibody IHC of human brain, cerebellum, Purkinje.

SLC38A1 / NaT2 Antibody (clone S104-32) - Background

Functions as a sodium-dependent amino acid transporter. Mediates the saturable, pH-sensitive and electrogenic cotransport of glutamine and sodium ions with a stoichiometry of 1:1. May also transport small zwitterionic and aliphatic amino acids with a lower affinity. May supply glutamatergic and GABAergic neurons with glutamine which is required for the synthesis of the neurotransmitters glutamate and GABA.

SLC38A1 / NaT2 Antibody (clone S104-32) - References

Wang H.,et al.Biochem. Biophys. Res. Commun. 273:1175-1179(2000).
Xu X.,et al.Submitted (MAR-2000) to the EMBL/GenBank/DDBJ databases.
Ota T.,et al.Nat. Genet. 36:40-45(2004).
Otsuki T.,et al.DNA Res. 12:117-126(2005).
Mural R.J.,et al.Submitted (JUL-2005) to the EMBL/GenBank/DDBJ databases.