Datasheet for ABIN7043722

anti-SLC38A1 antibody (Cytosolic)

2 Images

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Overview

Quantity:	50 µL
Target:	SLC38A1
Binding Specificity:	AA 41-57, Cytosolic
Reactivity:	Rat
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This SLC38A1 antibody is un-conjugated
Application:	Western Blotting (WB), Immunohistochemistry (IHC)

Product Details

Purpose:	A Rabbit Polyclonal Antibody to SLC38A1 Transporter
Immunogen:	Immunogen: Synthetic peptide Immunogen Sequence: (C)SKFISDRESRRSLTNSH, corresponding to amino acid residues 41-57 of rat SLC38A1
Isotype:	IgG
Specificity:	Cytoplasmic, N-terminus
Cross-Reactivity:	Human, Mouse, Rat
Predicted Reactivity:	Mouse,human - identical
Characteristics:	Anti-SLC38A1 Antibody (ABIN7043722, ABIN7044857 and ABIN7044858) is a highly specific antibody directed against an epitope of the rat protein. The antibody can be used in western

Product Details

	blot analysis. It has been designed to recognize SNAT1 from human, rat, and mouse samples.
Purification:	Affinity purified on immobilized antigen.

Target Details

Target:	SLC38A1
Alternative Name:	SLC38A1 (SLC38A1 Products)
Background:	Sodium-coupled neutral amino acid transporter 1, Snat1, Amino acid transporter A1, rATA1, Glutamine transporter, N-system amino acid transporter 2, Ata1, Glnt, Sa2, Sat1,SNAT1 (SLC38A1, Sodium-coupled neutral amino acid transporter 1) is a 486 amino acids system A type sodium symporter that catalyzes the electrogenic Na+-dependent uptake of glutamine, among other substrates. SNAT1 is thought to be responsible for glutamine uptake into neurons1.SNAT1 belongs to the β-family of solute carriers that includes three SLC families, SLC32, SLC36, and SLC38. SNAT1 is a member of the SLC38 family that includes 11 members, SNAT1 to SNAT11.SNAT1 and SNAT2 are expressed in neurons and in glial cells all over the central nervous system, with high expression in perivascular glial profiles and lower expression in astrocytes of the cerebral parenchyma. This supports a role in controlling the amino acid permeability at the blood-brain barrier2. SNAT1 also acts as a positive regulator of mTORC1 signaling pathway in neurons and plays an important pathological role in the mechanism underlying neuronal survival after ischemia3. It was also shown to be up-regulated in specific types of cancer4.The structure of SNAT proteins is predicted to have a 5+5 inverted repeat fold typical of the bacterial LeuT, with intracellular N-terminus and extracellular and C-terminal tail5. Alternative names: Sodium-coupled neutral amino acid transporter 1, Snat1, Amino acid transporter A1, rATA1, Glutamine transporter, N-system amino acid transporter 2, Ata1, Glnt, Sa2, Sat1
Gene ID:	170567
NCBI Accession:	NM_001077484
UniProt:	Q9JM15

Application Details

Application Notes:	Antigen preadsorption control: 1 µg peptide per 1 µg antibody Application Dilutions Immunohistochemistry paraffin embedded sections ihc: 1:200 Application Dilutions Western blot wb: 1:200-1:500

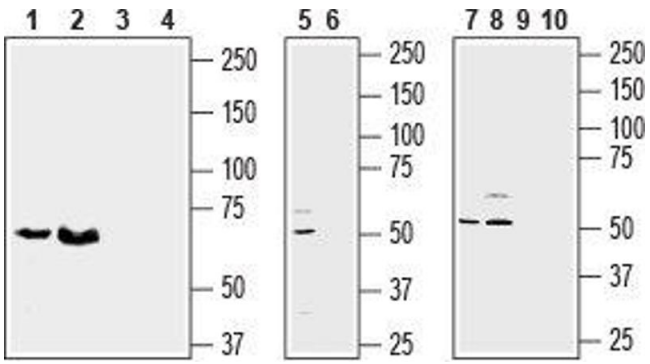
Application Details

Comment:	Negative Control: (ABIN7237083) Blocking Peptide: (ABIN7237083)
Restrictions:	For Research Use only

Handling

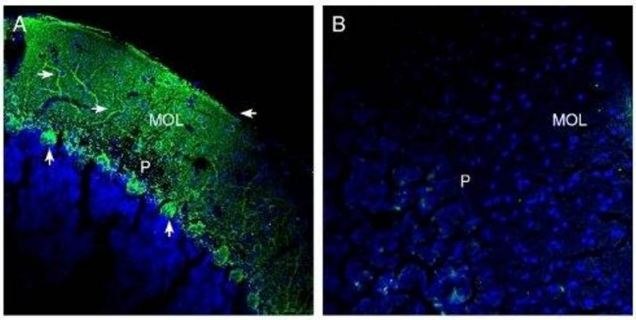
Format:	Lyophilized
Reconstitution:	Recosntitute with double distilled water (DDW) to a concentration of 1.0 mg/mL.
Concentration:	1 mg/mL
Buffer:	PBS pH 7.4
Storage:	4 °C,-20 °C
Storage Comment:	Storage before reconstitution: The antibody ships as a lyophilized powder at room temperature. Upon arrival, it should be stored at -20°C. Storage after reconstitution: The reconstituted solution can be stored at 4°C for up to 1 week. For longer periods, small aliquots should be stored at -20°C. Avoid multiple freezing and thawing. Centrifuge all antibody preparations before use (10000 x g 5 min).

Images



Western Blotting

Image 1. Western blot analysis of rat brain lysate (lanes 1 and 3), rat placenta (lanes 2 and 4), (1:800), mouse brain membrane (lanes 5 and 6), (1:200), human U-87 MG (lanes 7 and 9), and human Jurkat (lanes 8 and 10), (1:500) cell lysates: - 1, 2, 5, 7, 8. Anti-SLC38A1 Antibody (ABIN7043722, ABIN7044857 and ABIN7044858). 3, 4, 6, 9, 10. Anti-SLC38A1 Antibody, preincubated with SLC38A1 Blocking Peptide (#BLP-NT184).



Immunohistochemistry

Image 2. Expression of SLC38A1 in rat cerebellum. - Immunohistochemical staining of perfusion-fixed frozen rat brain sections with Anti-SLC38A1 Antibody (ABIN7043722, ABIN7044857 and ABIN7044858), (1:200), followed by goat anti-rabbit-AlexaFluor-488. A. SLC38A1 immunoreactivity (green) appears in neurons of the purkinje cell layer (P, vertical arrows) and in dendrites in the molecular layer (MOL, horizontal arrows). B. Pre-incubation of the antibody with SLC38A1 Blocking Peptide (BLP-NT184), suppressed staining. Cell nuclei are stained with DAPI (blue).

