10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

PMAT(Slc29a4) Antibody (C-term) Blocking Peptide

Synthetic peptide
Catalog # BP1087b

Specification

PMAT(Slc29a4) Antibody (C-term) Blocking Peptide - Product Information

Primary Accession Q8R139

PMAT(Slc29a4) Antibody (C-term) Blocking Peptide - Additional Information

Gene ID 243328

Other Names
Equilibrative nucleoside transporter 4, Solute carrier family 29 member 4, Slc29a4, Ent4

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP1087b was selected from the Slc29a4 region of human PMAT(Slc29a4). 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.

PMAT(Slc29a4) Antibody (C-term) Blocking Peptide - Protein Information

Name Slc29a4 {ECO:0000312|MGI:MGI:2385330}

Function
Electrogenic voltage-dependent transporter that mediates the transport of a variety of endogenous bioactive amines, cationic xenobiotics and drugs (PubMed:16873718, PubMed:23255610). Utilizes the physiologic inside-negative membrane potential as a driving force to facilitate cellular uptake of organic cations (By similarity). Functions as a Na(+)- and Cl(-)-independent bidirectional transporter (By similarity). Substrate transport is pH-dependent and enhanced under acidic condition, which is most likely the result of allosteric changes in the transporter structure (PubMed:16873718). Implicated in monoamine neurotransmitters uptake such as serotonin, dopamine, adrenaline/epinephrine, noradrenaline/norepinephrine, histamine and tyramine, thereby supporting a role in homeostatic regulation of aminergic neurotransmission in the central nervous

system (PubMed:23255610). Also responsible for the uptake of bioactive amines and drugs through the blood-cerebrospinal fluid (CSF) barrier, from the CSF into choroid plexus epithelial cells, thereby playing a significant role in the clearance of cationic neurotoxins, xenobiotics and metabolic waste in the brain (PubMed:23255610). Involved in bidirectional transport of the purine nucleoside adenosine and plays a role in the regulation of extracellular adenosine concentrations in cardiac tissues, in particular during ischemia (PubMed:16873718). May be involved in organic cation uptake from the tubular lumen into renal tubular cells, thereby contributing to organic cation reabsorption in the kidney (PubMed:23255610). Also transports adenine and guanidine (PubMed:16873718).

Cellular Location
Cell membrane {ECO:0000250|UniProtKB:Q7RTT9}; Multi-pass membrane protein. Apical cell membrane; Multi-pass membrane protein. Note=Localized to the apical blood-cerebrospinal fluid(CSF)-facing membrane of the choroid plexus epithelium

Tissue Location
Expressed in heart (PubMed:16873718). Expressed in choroid plexus (PubMed:23255610).

PMAT(Slc29a4) Antibody (C-term) Blocking Peptide - Protocols

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

- Blocking Peptides

PMAT(Slc29a4) Antibody (C-term) Blocking Peptide - Images

PMAT(Slc29a4) Antibody (C-term) Blocking Peptide - Background

PMAT(Slc29a4) is a member of the SLC29 family and encodes a plasma membrane protein with 11 transmembrane helices. This protein catalyzes the re-uptake of monoamines into presynaptic neurons, thus determining the intensity and duration of monoamine neural signaling. It has been shown to transport several compounds, including serotonin, dopamine, and the neurotoxin 1-methyl-4-phenylpyridinium.

PMAT(Slc29a4) Antibody (C-term) Blocking Peptide - References

Barnes,K., Circ. Res. 99 (5), 510-519 (2006)Engel,K., J. Biol. Chem. 279 (48), 50042-50049 (2004)