

**PMAT(Slc29a4) Antibody (N-term) Blocking Peptide**  
**Synthetic peptide**  
**Catalog # BP1087a****Specification**

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**PMAT(Slc29a4) Antibody (N-term) Blocking Peptide - Product Information**Primary Accession [Q8R139](#)**PMAT(Slc29a4) Antibody (N-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 [AP1087a](/products/AP1087a) 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 (N-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](http://www.uniprot.org/citations/16873718), PubMed: [23255610](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/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:<a href="http://www.uniprot.org/citations/23255610" target="\_blank">23255610</a>). 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:<a href="http://www.uniprot.org/citations/23255610" target="\_blank">23255610</a>). 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:<a href="http://www.uniprot.org/citations/16873718" target="\_blank">16873718</a>). 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:<a href="http://www.uniprot.org/citations/23255610" target="\_blank">23255610</a>). Also transports adenine and guanidine (PubMed:<a href="http://www.uniprot.org/citations/16873718" target="\_blank">16873718</a>).

#### **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 (N-term) Blocking Peptide - Protocols**

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

- [Blocking Peptides](#)

### **PMAT(Slc29a4) Antibody (N-term) Blocking Peptide - Images**

### **PMAT(Slc29a4) Antibody (N-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 reuptake 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 (N-term) Blocking Peptide - References**

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