

PMAT-Y198 Antibody (Center) Blocking peptide
Synthetic peptide
Catalog # BP5356a

Specification

PMAT-Y198 Antibody (Center) Blocking peptide - Product Information

Primary Accession
Other Accession

[Q7RTT9](#)
[NP_694979.2](#), [NP_001035751.1](#)

PMAT-Y198 Antibody (Center) Blocking peptide - Additional Information

Gene ID 222962

Other Names

Equilibrative nucleoside transporter 4, hENT4, Plasma membrane monoamine transporter, Solute carrier family 29 member 4, SLC29A4, ENT4, PMAT

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-Y198 Antibody (Center) Blocking peptide - Protein Information

Name SLC29A4 ([HGNC:23097](#))

Synonyms ENT4, PMAT

Function

Electrogenic voltage-dependent transporter that mediates the transport of a variety of endogenous bioactive amines, cationic xenobiotics and drugs (PubMed:15448143, PubMed:16099839, PubMed:16873718, PubMed:17018840, PubMed:17121826, PubMed:20592246, PubMed:20858707, PubMed:22396231, PubMed:31537831). Utilizes the physiologic inside-negative membrane potential as a driving force to facilitate cellular uptake of organic cations (PubMed:15448143, PubMed:20592246).

target="_blank">20592246, PubMed:22396231). Functions as a Na(+)- and Cl(-)- independent bidirectional transporter (PubMed:15448143, PubMed:16099839, PubMed:22396231, PubMed:31537831). 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, PubMed:17018840, PubMed:20592246, PubMed:22396231, PubMed:31537831). 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:15448143, PubMed:16099839, PubMed:17018840, PubMed:17121826, PubMed:20858707, PubMed:22396231). 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 (By similarity). 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, PubMed:20592246, PubMed:31537831). 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:17018840). Also transports guanidine (PubMed:16099839).

Cellular Location

Cell membrane; Multi-pass membrane protein. Apical cell membrane; Multi-pass membrane protein. Note=Located to the plasma membranes of ventricular myocytes and vascular endothelial cells (PubMed:16873718). Targeted to the apical membranes of differentiated kidney epithelial cells (PubMed:17018840). Localized to the apical blood-cerebrospinal fluid (CSF)-facing membrane of the choroid plexus epithelium (PubMed:23255610).

Tissue Location

Mainly expressed in brain and skeletal muscle (PubMed:15448143, PubMed:16873718, PubMed:20592246, PubMed:20858707) In brain, expressed in cerebellum, cerebral cortex, medulla oblongata, occipital pole, frontal and temporal lobes putamen, spinal cord, substantia nigra, hippocampus, caudate nucleus, nucleus accumbens, pons and choroid plexus (PubMed:15448143, PubMed:16873718, PubMed:20858707, PubMed:23255610). Expressed in heart, in both cardiomyocytes and vascular endothelial cells (PubMed:15448143, PubMed:20858707, PubMed:16873718). Also expressed in adrenal gland, small intestine, pancreas, kidney, liver, bone marrow, lymph node (PubMed:15448143, PubMed:16873718, PubMed:17018840, PubMed:20858707). Located in endometrial stroma, where the expression is high in the proliferative phase, decreases during the secretory phase, and is no longer detectable in the menstrual phase (PubMed:17393420)

PMAT-Y198 Antibody (Center) Blocking peptide - Protocols

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

- [Blocking Peptides](#)

PMAT-Y198 Antibody (Center) Blocking peptide - Images**PMAT-Y198 Antibody (Center) Blocking peptide - Background**

PMAT 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-Y198 Antibody (Center) Blocking peptide - References

Xia, L., et al. Am. J. Physiol. Renal Physiol. 296 (6), F1307-F1313 (2009) Li, H., et al. PLoS ONE 3 (6), E2353 (2008) Bottalico, B., et al. Mol. Reprod. Dev. 74(10):1303-1311(2007)