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SLC1A5 Rabbit pAb

Catalog # AP99908

Product Information

Application	IHC-P, IHC-F, IF, E
Primary Accession	Q15758
Other Accession	Q15758
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Calculated MW	56598
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human SLC1A5
Epitope Specificity	465-515/541
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the sodium:dicarboxylate (SDF) symporter (TC 2.A.23) family. SLC1A5 subfamily.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	solute carrier family 1 (neutral amino acid transporter), member 5. mediates infections of RD114 feline endogenous virus, baboon endogenous virus and type D simian retroviruses; baboon M7 virus receptor; RD114 virus receptor; neutral amino acid transporter B.

Additional Information

Gene ID	6510
Other Names	AAAT; ASCT2; ATBO; M7V1; M7VS1; R16; RDRC; Slc1a7; ATB(0); H4-ASCT2; AAAT_HUMAN; SLC1A5; Baboon M7 virus receptor; RD114/simian type D retrovirus receptor; Sodium-dependent neutral amino acid transporter type 2; Solute carrier family 1 member 5; RDR; AAAT_MOUSE; ASC-like Na(+)-dependent neutral amino acid transporter ASCT2; Insulin-activated amino acid transporter; Q9Z1J7_RAT; solute carrier family 1 (neutral amino acid transporter), member 5; Alanine/serine/cysteine transporter 2; ASC amino acid transporter-2; Neutral amino acid transporter B(0)
Dilution	IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500,ELISA=1:5000-10000
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	SLC1A5 {ECO:0000303|PubMed:23756778}
Function	Sodium-coupled antiporter of neutral amino acids. In a tri- substrate transport cycle, exchanges neutral amino acids between the extracellular and intracellular compartments, coupled to the inward cotransport of at least one sodium ion (PubMed:17094966, PubMed:23756778, PubMed:26492990, PubMed:29872227, PubMed:34741534, PubMed:8702519, PubMed:39095408, PubMed:27272177). The preferred substrate is the essential amino acid L-glutamine, a precursor for biosynthesis of proteins, nucleotides and amine sugars as well as an alternative fuel for mitochondrial oxidative phosphorylation. Exchanges L-glutamine with other neutral amino acids such as L-serine, L- threonine and L-asparagine in a bidirectional way. Provides L-glutamine to proliferating stem and activated cells driving the metabolic switch toward cell differentiation (PubMed:23756778, PubMed:24953180). The transport cycle is usually pH-independent, with the exception of L-glutamate. Transports extracellular L-glutamate coupled to the cotransport of one proton and one sodium ion in exchange for intracellular L-glutamine counter-ion. May provide for L-glutamate uptake in glial cells regulating glutamine/glutamate cycle in the nervous system (PubMed:32733894). Part of transport systems for D-amino acids. Mediates D-serine release from the retinal glia potentially affecting NMDA receptor function in retinal neurons. May contribute to D-serine reabsorption at the brush border of renal proximal tubules thus modulating the dynamics of urinary versus blood D-serine levels (PubMed:17094966, PubMed:38650461). Displays sodium- and amino acid- dependent but uncoupled channel-like anion conductance with a preference SCN(-) >> NO3(-) > I(-) > Cl(-) (By similarity). Through binding of the fusogenic protein syncytin-1/ERVW-1 may mediate trophoblasts syncytialization, the spontaneous fusion of their plasma membranes, an essential process in placental development (PubMed:10708449, PubMed:23492904, PubMed:38671230).
Cellular Location	Cell membrane; Multi-pass membrane protein. Apical cell membrane {ECO:0000250|UniProtKB:P51912}; Multi-pass membrane protein. Melanosome. Note=Identified by mass spectrometry in melanosome fractions from stage I to stage IV. Restricted to the apical cell membrane of proximal tubule epithelial cells {ECO:0000250|UniProtKB:P51912, ECO:0000269|PubMed:17081065}
Tissue Location	Placenta, lung, skeletal muscle, kidney, pancreas, and intestine (PubMed:8702519). Expressed in CD34-positive hematopoietic progenitors (at protein level) (PubMed:24953180)

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.