

SLC1A5 / ASCT2 Antibody (Internal)
Rabbit Polyclonal Antibody
Catalog # ALS11058**Specification**

SLC1A5 / ASCT2 Antibody (Internal) - Product Information

Application	IHC
Primary Accession	Q15758
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Calculated MW	57kDa KDa

SLC1A5 / ASCT2 Antibody (Internal) - Additional Information**Gene ID** 6510**Other Names**

Neutral amino acid transporter B(0), ATB(0), Baboon M7 virus receptor, RD114/simian type D retrovirus receptor, Sodium-dependent neutral amino acid transporter type 2, Solute carrier family 1 member 5, SLC1A5, ASCT2, M7V1, RDR, RDRC

Target/Specificity

Human SLC1A5. BLAST analysis of the peptide immunogen showed no homology with other human proteins.

Reconstitution & Storage

Short term 4°C, long term aliquot and store at -20°C, avoid freeze thaw cycles.

Precautions

SLC1A5 / ASCT2 Antibody (Internal) is for research use only and not for use in diagnostic or therapeutic procedures.

SLC1A5 / ASCT2 Antibody (Internal) - 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:23756778, PubMed:26492990, PubMed:17094966, PubMed:34741534, PubMed:29872227, PubMed:8702519). 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). Can transport D-amino acids. Mediates D-serine release from the retinal glia potentially affecting NMDA receptor function in retinal neurons (PubMed:17094966). Displays sodium- and amino acid-dependent but uncoupled channel-like anion conductance with a preference $\text{SCN}(-) \gg \text{NO}_3(-) > \text{I}(-) > \text{Cl}(-)$ (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).

Cellular Location

Cell membrane; Multi-pass membrane protein. Melanosome Note=Identified by mass spectrometry in melanosome fractions from stage I to stage IV

Tissue Location

Placenta, lung, skeletal muscle, kidney, pancreas, and intestine (PubMed:8702519). Expressed in CD34-positive hematopoietic progenitors (at protein level) (PubMed:24953180)

Volume

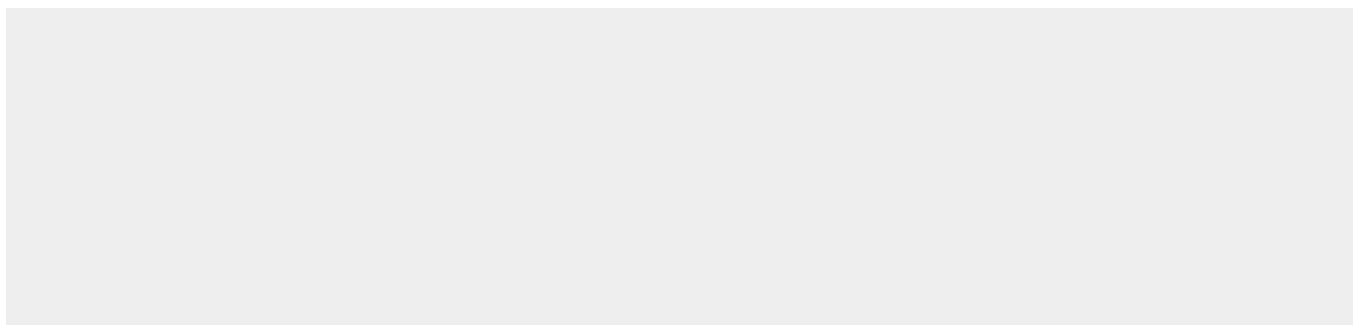
50 µl

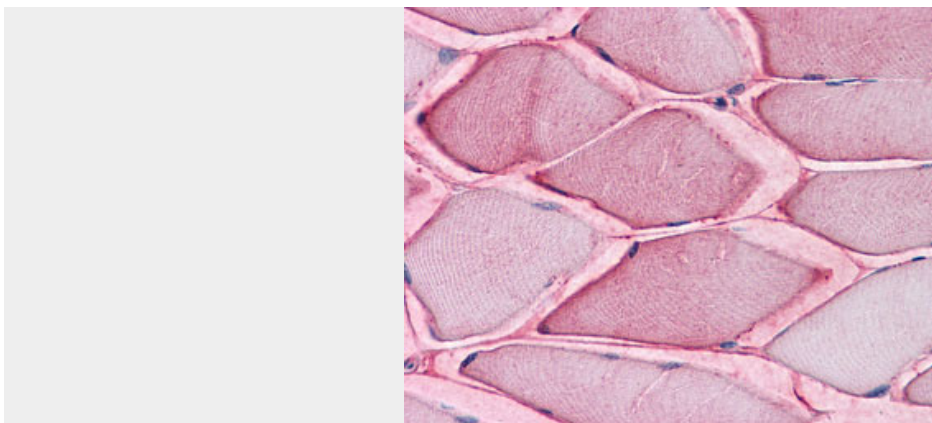
SLC1A5 / ASCT2 Antibody (Internal) - Protocols

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

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

SLC1A5 / ASCT2 Antibody (Internal) - Images





Anti-SLC1A5 antibody ALS11058 IHC of human skeletal muscle.

SLC1A5 / ASCT2 Antibody (Internal) - Background

Sodium-dependent amino acids transporter that has a broad substrate specificity, with a preference for zwitterionic amino acids. It accepts as substrates all neutral amino acids, including glutamine, asparagine, and branched-chain and aromatic amino acids, and excludes methylated, anionic, and cationic amino acids. May also be activated by insulin. 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). Acts as a cell surface receptor for feline endogenous virus RD114, baboon M7 endogenous virus and type D simian retroviruses (PubMed:10051606, PubMed:10196349).

SLC1A5 / ASCT2 Antibody (Internal) - References

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Rasko J.E.J.,et al.Proc. Natl. Acad. Sci. U.S.A. 96:2129-2134(1999).
Tailor C.S.,et al.J. Virol. 73:4470-4474(1999).
Ouyang D.-Y.,et al.Submitted (SEP-2009) to the EMBL/GenBank/DDBJ databases.
Ota T.,et al.Nat. Genet. 36:40-45(2004).