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

SLC1A5 / ASCT2 Antibody (Internal)
Rabbit Polyclonal Antibody
Catalog # ALS11056

Specification

SLC1A5 / ASCT2 Antibody (Internal) - Product Information

Application	**IHC-P**
Primary Accession	Q15758
Reactivity	**Human**
Host	**Rabbit**
Clonality	**Polyclonal**
Calculated MW	**57kDa KDa**
Dilution	**IHC-P~~N/A**

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:17094966, PubMed:23756778, PubMed:26492990, PubMed:29872227, PubMed:34741534, 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 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).

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
125 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 Cytomety
- Cell Culture

SLC1A5 / ASCT2 Antibody (Internal) - Images

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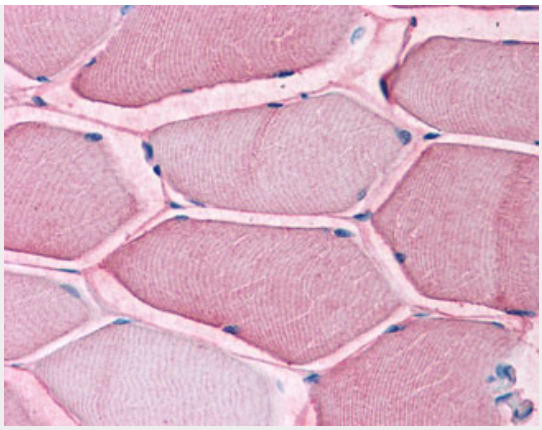

Anti-SLC1A5 antibody ALS11056 IHC of human skeletal muscle.

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

Kekuda R.,et al.J. Biol. Chem. 271:18657-18661(1996).
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).