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

SLC3A1 Antibody (Center) Blocking Peptide

Synthetic peptide
Catalog # BP8802c

Specification

SLC3A1 Antibody (Center) Blocking Peptide - Product Information

Primary Accession Q07837

SLC3A1 Antibody (Center) Blocking Peptide - Additional Information

Gene ID 6519

Other Names
Neutral and basic amino acid transport protein rBAT, NBAT, D2h, Solute carrier family 3 member 1, b(0, +)-type amino acid transport protein, SLC3A1, RBAT

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP8802c was selected from the Center region of human SLC3A1. 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.

SLC3A1 Antibody (Center) Blocking Peptide - Protein Information

Name SLC3A1 {ECO:0000303|PubMed:9186880, ECO:0000312|HGNC:HGNC:11025}

Function
Acts as a chaperone that facilitates biogenesis and trafficking of functional transporter heteromers to the plasma membrane (PubMed:16825196, PubMed:10588648, PubMed:32817565, PubMed:32494597, PubMed:11318953, PubMed:16609684, PubMed:8486766, PubMed:7686906, PubMed:8663184, PubMed:<a href="http://www.uniprot.org/citations/8663357"

target="_blank">8663357) (By similarity). Associates with SLC7A9 to form a functional transporter complex that mediates the electrogenic exchange between cationic amino acids and neutral amino acids, with a stoichiometry of 1:1. SLC7A9-SLC3A1 transporter has system b(0,+)-like activity with high affinity for extracellular cationic amino acids and L-cystine and lower affinity for intracellular neutral amino acids. Substrate exchange is driven by high concentration of intracellular neutral amino acids and the intracellular reduction of L-cystine to L- cysteine. SLC7A9-SLC3A1 acts as a major transporter for reabsorption of L-cystine and dibasic amino acids across the brush border membrane in early proximal tubules (PubMed:10588648, PubMed:11318953, PubMed:16609684, PubMed:16825196, PubMed:32494597, PubMed:32817565, PubMed:7686906, PubMed:8486766, PubMed:8663184, PubMed:8663357). Associates with SLC7A13 to form a functional complex that transports anionic and neutral amino acids via exchange or facilitated diffusion. SLC7A13-SLC3A1 may act as a major transporter for L-cystine in late proximal tubules, ensuring its reabsorption from the luminal fluid in exchange for cytosolic L-glutamate or L-aspartate (By similarity).

Cellular Location
Cell membrane; Single-pass type II membrane protein. Apical cell membrane {ECO:0000250|UniProtKB:Q91WV7}; Single-pass type II membrane protein

Tissue Location
Expressed in the brush border membrane in the kidney (at protein level). Predominantly expressed in the kidney, small intestine and pancreas. Weakly expressed in liver

SLC3A1 Antibody (Center) Blocking Peptide - Protocols

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

- Blocking Peptides

SLC3A1 Antibody (Center) Blocking Peptide - Images

SLC3A1 Antibody (Center) Blocking Peptide - Background

SLC3A1 is a type II membrane glycoprotein which is one of the components of the renal amino acid transporter which transports neutral and basic amino acids in the renal tubule and intestinal tract.

SLC3A1 Antibody (Center) Blocking Peptide - References

Chabrol,B., et.al., J. Med. Genet. 45 (5), 314-318 (2008)