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SLC3A1 Antibody (Center)
Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP8802c

Specification

SLC3A1 Antibody (Center) - Product Information

Application	**FC, WB,E**
Primary Accession	Q07837
Reactivity	**Human**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**78852**
Antigen Region	**156-184**

SLC3A1 Antibody (Center) - 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
This SLC3A1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 156-184 amino acids from the Central region of human SLC3A1.

Dilution
FC~~1:10~50
WB~~1:1000
E~~Use at an assay dependent concentration.

Format
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

Storage
Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
SLC3A1 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

SLC3A1 Antibody (Center) - 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 (By similarity) (PubMed:10588648, PubMed:11318953, PubMed:16609684, PubMed:16825196, PubMed:32494597, PubMed:32817565, PubMed:7686906, PubMed:8486766, PubMed:8663184, PubMed:8663357). 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

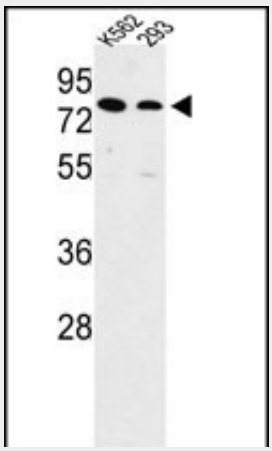
Tissue Location
Expressed in the brush border membrane in the kidney (at protein level). Predominantly expressed in the kidney, small intestine and pancreas. Weakly expressed in liver

SLC3A1 Antibody (Center) - 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

SLC3A1 Antibody (Center) - Images



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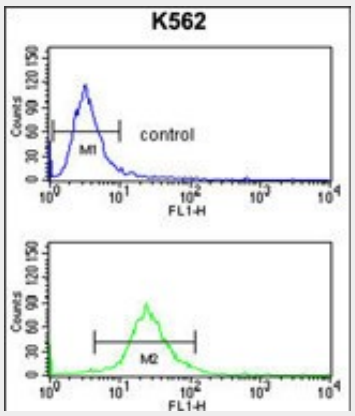
Western blot analysis of SLC3A1 Antibody (Center) (Cat. #AP8802c) in K562, 293 cell line lysates (35ug/lane). SLC3A1 (arrow) was detected using the purified Pab.



SLC3A1 Antibody (Center) (Cat. #AP8802c) flow cytometry analysis of K562 cells (bottom histogram) compared to a negative control cell (top histogram).FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

SLC3A1 Antibody (Center) - 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) - References

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