

# SLC1A1 Antibody

Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AP50729

## Product Information

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Application	WB
Primary Accession	<a href="#">P43005</a>
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	57100

## Additional Information

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Gene ID	6505
Other Names	Excitatory amino acid transporter 3, Excitatory amino-acid carrier 1, Neuronal and epithelial glutamate transporter, Sodium-dependent glutamate/aspartate transporter 3, Solute carrier family 1 member 1, SLC1A1, EAAC1, EAAT3
Target/Specificity	KLH-conjugated synthetic peptide encompassing a sequence within the center region of human EAAT3. The exact sequence is proprietary.
Dilution	WB~~ 1:500
Storage	Store at -20 °C.Stable for 12 months from date of receipt

## Protein Information

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Name	SLC1A1 ( <a href="#">HGNC:10939</a> )
Function	Sodium-dependent, high-affinity amino acid transporter that mediates the uptake of L-glutamate and also L-aspartate and D-aspartate (PubMed: <a href="#">21123949</a> , PubMed: <a href="#">26690923</a> , PubMed: <a href="#">33658209</a> , PubMed: <a href="#">7521911</a> , PubMed: <a href="#">7914198</a> , PubMed: <a href="#">8857541</a> ). Can also transport L-cysteine (PubMed: <a href="#">21123949</a> ). Functions as a symporter that transports one amino acid molecule together with two or three Na(+) ions and one proton, in parallel with the counter-transport of one K(+) ion (PubMed: <a href="#">26690923</a> , PubMed: <a href="#">33658209</a> , PubMed: <a href="#">7521911</a> , PubMed: <a href="#">8857541</a> ). Mediates Cl(-) flux that is not coupled to amino acid transport; this avoids the accumulation of negative charges due to aspartate and Na(+) symport (PubMed: <a href="#">26690923</a> , PubMed: <a href="#">8857541</a> ). Plays an important role in L- glutamate and L-aspartate reabsorption in renal tubuli (PubMed: <a href="#">21123949</a> ). Plays a redundant role in the rapid removal of released glutamate from the synaptic cleft, which is essential for terminating the postsynaptic action of glutamate (By similarity). Contributes to glutathione biosynthesis and protection against oxidative stress via its role in L-glutamate and L-cysteine transport (By similarity).

Negatively regulated by ARL6IP5 (By similarity).

### Cellular Location

Cell membrane; Multi-pass membrane protein {ECO:0000250|UniProtKB:P43003}. Apical cell membrane; Multi-pass membrane protein {ECO:0000250|UniProtKB:P43003}. Synapse, synaptosome {ECO:0000250|UniProtKB:P51906}. Early endosome membrane {ECO:0000250|UniProtKB:P51906}. Late endosome membrane {ECO:0000250|UniProtKB:P51906}. Recycling endosome membrane {ECO:0000250|UniProtKB:P51906}

### Tissue Location

Expressed in all tissues tested including liver, muscle, testis, ovary, retinoblastoma cell line, neurons and brain (in which there was dense expression in substantia nigra, red nucleus, hippocampus and in cerebral cortical layers)

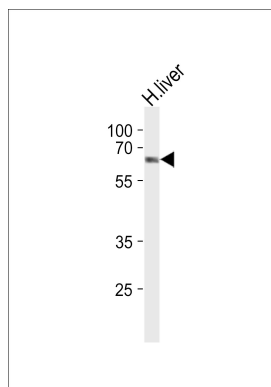
## Background

Transports L-glutamate and also L- and D-aspartate. Essential for terminating the postsynaptic action of glutamate by rapidly removing released glutamate from the synaptic cleft. Acts as a symport by cotransporting sodium. Negatively regulated by ARL6IP5 (By similarity).

## References

Shashidharan P.,et al.Brain Res. 662:245-250(1994).  
Kanai Y.,et al.J. Biol. Chem. 269:20599-20606(1994).  
Arriza J.L.,et al.J. Neurosci. 14:5559-5569(1994).  
Veenstra-VanderWeele J.,et al.Mol. Psychiatry 6:160-167(2001).  
Yasuda-Kamatani Y.,et al.Submitted (OCT-1997) to the EMBL/GenBank/DBJ databases.

## Images



Western blot analysis of lysates from human liver tissue lysate,using SLC1A1 Antibody was diluted at 1:500 at each lane. A goat anti-rabbit IgG H&L(HRP) at 1:5000 dilution was used as the secondary antibody.Lysates at 35ug per lane.

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