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SLC7A8 Antibody - N-terminal region

Rabbit Polyclonal Antibody
Catalog # AI16061

Product Information

Application	WB
Primary Accession	Q9UHI5
Reactivity	Human, Horse, Bovine
Predicted	Human, Horse, Bovine
Host	Rabbit
Clonality	Polyclonal
Calculated MW	58382

Additional Information

Gene ID	23428
Other Names	Large neutral amino acids transporter small subunit 2, L-type amino acid transporter 2, hLAT2, Solute carrier family 7 member 8, SLC7A8, LAT2
Format	Liquid. Purified antibody supplied in 1x PBS buffer with 0.09% (w/v) sodium azide and 2% sucrose.
Reconstitution & Storage	Add 50 &mu, l of distilled water. Final Anti-SLC7A8 antibody concentration is 1 mg/ml in PBS buffer with 2% sucrose. For longer periods of storage, store at -20°C. Avoid repeat freeze-thaw cycles.
Precautions	SLC7A8 Antibody - N-terminal region is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	SLC7A8 (HGNC:11066)
Function	Associates with SLC3A2 to form a functional heterodimeric complex that translocates small and large neutral amino acids with broad specificity and a stoichiometry of 1:1. Functions as amino acid antiporter mediating the influx of extracellular essential amino acids mainly in exchange with the efflux of highly concentrated intracellular amino acids (PubMed:10391915, PubMed:11311135, PubMed:11847106, PubMed:12716892, PubMed:15081149, PubMed:15918515, PubMed:29355479, PubMed:33298890, PubMed:34848541). Has relatively symmetrical selectivities but strongly asymmetrical substrate affinities at both the intracellular and extracellular sides of the transporter (PubMed:11847106). This asymmetry allows SLC7A8 to regulate intracellular amino acid pools (mM concentrations) by exchange with external amino acids (uM concentration range), equilibrating the relative concentrations of different amino acids

	across the plasma membrane instead of mediating their net uptake (PubMed:10391915, PubMed:11847106). May play an essential role in the reabsorption of neutral amino acids from the epithelial cells to the bloodstream in the kidney (PubMed:12716892). Involved in the uptake of methylmercury (MeHg) when administered as the L-cysteine or D,L-homocysteine complexes, and hence plays a role in metal ion homeostasis and toxicity (PubMed:12117417). Involved in the cellular activity of small molecular weight nitrosothiols, via the stereoselective transport of L-nitrosocysteine (L-CNSO) across the transmembrane (PubMed:15769744). Imports the thyroid hormone diiodothyronine (T2) and to a smaller extent triiodothyronine (T3) but not rT 3 or thyroxine (T4) (By similarity). Mediates the uptake of L-DOPA (By similarity). May participate in auditory function (By similarity).
Cellular Location	Cell membrane; Multi-pass membrane protein. Basolateral cell membrane; Multi-pass membrane protein. Note=Localized to the cytoplasm when expressed alone but when coexpressed with SLC3A2/4F2hc, is localized to the plasma membrane. Colocalized with SLC3A2/4F2hc at the basolateral membrane of kidney cortex proximal tubules and small intestine epithelia of the villi.
Tissue Location	Strongest expression is observed in kidney and moderate expression in placenta and brain, followed by liver, prostate, testis, ovary, lymph node, thymus, spleen, skeletal muscle and heart Also expressed in fetal liver as well as in the retinal pigment epithelial cell line ARPE-19 and the intestinal epithelial cell line Caco-2.

Background

Sodium-independent, high-affinity transport of small and large neutral amino acids such as alanine, serine, threonine, cysteine, phenylalanine, tyrosine, leucine, arginine and tryptophan, when associated with SLC3A2/4F2hc. Acts as an amino acid exchanger. Has higher affinity for L-phenylalanine than LAT1 but lower affinity for glutamine and serine. L-alanine is transported at physiological concentrations. Plays a role in basolateral (re)absorption of neutral amino acids. Involved in the uptake of methylmercury (MeHg) when administered as the L-cysteine or D,L-homocysteine complexes, and hence plays a role in metal ion homeostasis and toxicity. Involved in the cellular activity of small molecular weight nitrosothiols, via the stereoselective transport of L-nitrosocysteine (L-CNSO) across the transmembrane. Plays an essential role in the reabsorption of neutral amino acids from the epithelial cells to the bloodstream in the kidney.

References

Pineda M.,et al.J. Biol. Chem. 274:19738-19744(1999).
Rossier G.,et al.J. Biol. Chem. 274:34948-34954(1999).
Borsani G.,et al.Nat. Genet. 21:297-301(1999).
Park S.Y.,et al.Arch. Pharm. Res. 28:421-432(2005).
Li W.B.,et al.Submitted (FEB-2003) to the EMBL/GenBank/DDBJ databases.

Images

Host: Rabbit
Target Name: SLC7A8
Sample Tissue: 293T Whole cell lysate
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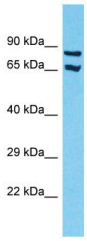
Antibody Dilution: 1.0μg/ml



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