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SLC7A8 Antibody (C-Term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP22256b

Product Information

Application	WB, FC, E
Primary Accession	Q9UHI5
Other Accession	Q5RAE3
Reactivity	Human
Host	Rabbit
Clonality	polyclonal
Isotype	Rabbit IgG
Clone Names	RB55244
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
Target/Specificity	This SLC7A8 antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between 476-506 amino acids from human SLC7A8.
Dilution	WB~~1:1000-1:2000 FC~~1:25 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	SLC7A8 Antibody (C-Term) 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) (PubMed:26305885). Mediates the uptake of L-DOPA (By similarity). May participate in auditory function (By similarity). Mediates the uptake of leucine and 3-iodo-L-tyrosine (MIT) (PubMed:26305885). Mediates the uptake of 3,5-diiodo-L-tyrosine (DIT) (PubMed:38661522).
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.

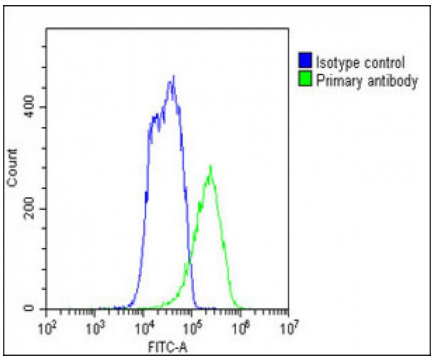
Background

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.

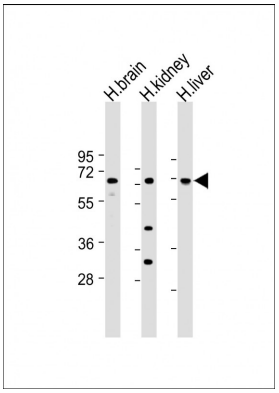
References

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



Overlay histogram showing HepG2 cells stained with AP22256b(green line). The cells were fixed with 2% paraformaldehyde 10 min. The cells were then icubated in 2% bovine serum albumin to block non-specific protein-protein interactions followed by the antibody (AP22256b, 1:25 dilution) for 60 min at 37ºC. The secondary antibody used was Goat-Anti-Rabbit IgG, DyLight® 488 Conjugated Highly Cross-Adsorbed(1583138) at 1/200 dilution for 40 min at 37ºC. Isotype control antibody (blue line) was rabbit IgG1 (1µg/1x10^6 cells) used under the same conditions. Acquisition of >10, 000 events was performed.



All lanes : Anti-SLC7A8 Antibody (C-Term) at 1:1000-1:2000 dilution Lane 1: Human brain lysate Lane 2: Human kidney lysate Lane 3: Human liver lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 58 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

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