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SLC7A8 / LAT2 Antibody (clone 4H10)

Mouse Monoclonal Antibody
Catalog # ALS17207

Specification

SLC7A8 / LAT2 Antibody (clone 4H10) - Product Information

Application	**IHC-P, IF, IP, FC**
Primary Accession	Q9UHI5
Other Accession	23428
Reactivity	**Human**
Host	**Mouse**
Clonality	**Monoclonal**
Isotype	**IgG1**
Calculated MW	**58382**
Dilution	**IHC-P~~N/A** **IF~~1:50~200** **IP~~N/A** **FC~~1:10~50**

SLC7A8 / LAT2 Antibody (clone 4H10) - Additional Information

Gene ID 23428

Other Names
SLC7A8, HLAT2, LPI-PC1, Integral membrane protein E16H

Target/Specificity
Human SLC7A8

Reconstitution & Storage
PBS, pH 7.3, 1% BSA, 50% glycerol, 0.02% sodium azide. Store at -20°C. Minimize freezing and thawing.

Precautions
SLC7A8 / LAT2 Antibody (clone 4H10) is for research use only and not for use in diagnostic or therapeutic procedures.

SLC7A8 / LAT2 Antibody (clone 4H10) - 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:<a

href="http://www.uniprot.org/citations/11847106" target="_blank">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.

SLC7A8 / LAT2 Antibody (clone 4H10) - 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

SLC7A8 / LAT2 Antibody (clone 4H10) - Images

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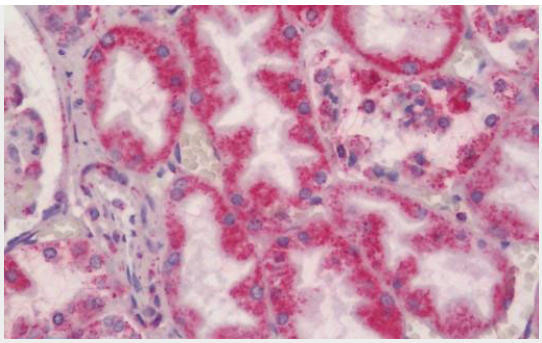
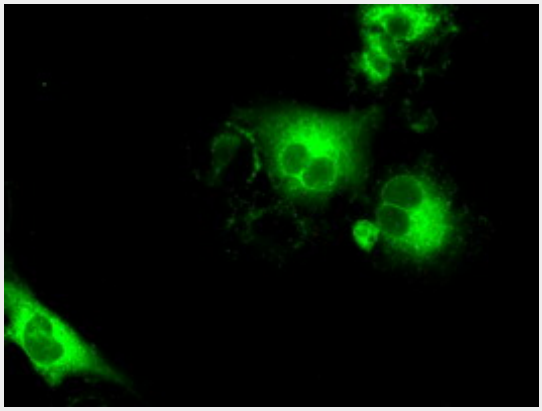
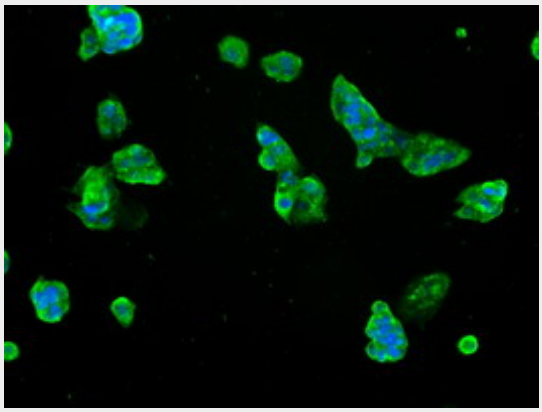


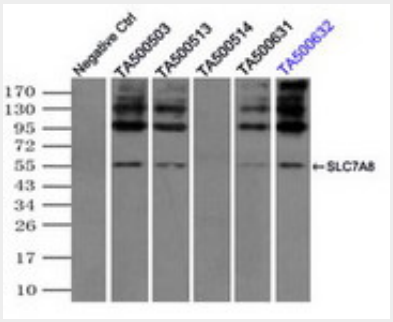
Human Kidney: Formalin-Fixed, Paraffin-Embedded (FFPE)



Anti-SLC7A8 mouse monoclonal antibody immunofluorescent staining of COS7 cells transiently...



Immunofluorescent staining of HepG2 cells using anti-SLC7A8 mouse monoclonal antibody.



Flow cytometry of Jurkat cells, using anti-SLC7A8 antibody, (Red) compared to a nonspecific...

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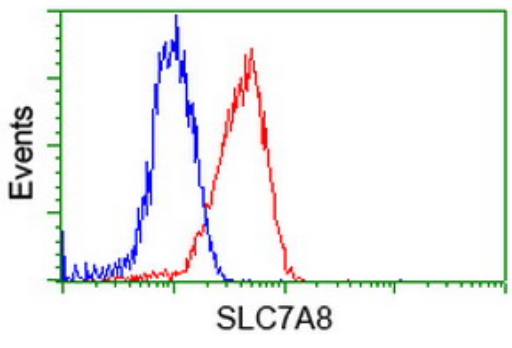

Flow cytometry of Jurkat cells, using anti-SLC7A8 antibody (Red), compared to a nonspecific...

SLC7A8 / LAT2 Antibody (clone 4H10) - 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.

SLC7A8 / LAT2 Antibody (clone 4H10) - 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.