# SLC7A8 Antibody – Rabbit Polyclonal

## PRODUCT OVERVIEW

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| **Product Name** | LAT2 (SLC7A8), Polyclonal Antibody |
| **Full Product Name** | LAT2 Antibody |
| **Product Gene Name** | anti-SLC7A8 antibody |
| **Product Synonym Names** | hLAT2; integral membrane protein E16H; L type amino acid transporter 2; L-type amino acid transporter 2; Large neutral amino acids transporter small subunit 2; LAT2_HUMAN; LPI PC1; SLC7A8; solute carrier family 7 (amino acid transporter light chain, L system), member 8; solute carrier family 7 (amino acid transporter, L type), member 8; solute carrier family 7 (cationic amino acid transporter, y+ system), member 8; Solute carrier family 7 member 8 |
| **Clonality** | Polyclonal |
| **Isotype** | Rabbit IgG |
| **Host** | Rabbit |
| **Species Reactivity** | Human |
| **Form/Format** | Liquid. Rabbit IgG in phosphate buffered saline, pH7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. |
| **Purity/Purification** | The antiserum was purified by peptide affinity chromatography using SulfoLink Coupling Resin (Thermo Fisher Scientific). |
| **Concentration** | 1mg/ml (lot specific) |
| **Specificity** | LAT2 Antibody detects endogenous levels of total LAT2. |
| **Preparation and Storage** | Store at -20 degree C. Stable for 12 months from date of receipt. |
| **Antibody/Peptide Pairs** | SLC7A8 peptide (MBS9631742) is used for blocking the activity of SLC7A8 antibody (MBS9629359) |
| **Molecular Weight** | 48,283 Da |
| **OMIM** | 604235 |
| **3D Structure** | ModBase 3D Structure for Q9UHI5 |
| **Supply Chain Verification** | Manufactured in a lab with traceable raw materials manufactured on site. Coordinated product portfolio of antibodies, pairs, conjugates, recombinant proteins, and immunoassay materials available, please inquire. |
| **Immunogen** | A synthesized peptide derived from Human MYOCD. |
| **Conjugation** | Unconjugated |
| **Similarity** | Belongs to the amino acid-polyamine-organocation (APC) superfamily. L-type amino acid transporter (LAT) (TC 2. A. 3. 8) family. |
| **Subunit Structure** | Disulfide-linked heterodimer with the amino acid transport protein SLC3A2/4F2hc. |
| **Tissue Specificity** | 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. |

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| **Function** | 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. |
| **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. |
| **Product Categories/Family for anti-SLC7A8 antibody** | Cytoplasm; Basolateral cell membrane; Multi-pass membrane protein; Primary |
| **ISO Certification** | Manufactured in an ISO 9001:2015 Certified Laboratory. |
| **Applications Tested/Suitable for anti-SLC7A8 antibody** | ELISA (EIA)(peptide) |
| **Application Notes for anti-SLC7A8 antibody** | ELISA(peptide): 1:20000-1:40000 |
| **Related Product Information for anti-SLC7A8 antibody** | MBS9629359 is an antibody targeting SLC7A8. Also known as LAT2 Antibody. Reactive in Human. Host: Rabbit. |
| **Other Notes** | Small volumes of anti-SLC7A8 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply. |

## ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for SLC7A8. It may not necessarily be applicable to this product.

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| **NCBI GI #** | 33286428 |
| **NCBI GeneID** | 23428 |
| **NCBI Accession #** | NP_036376.2 |
| **UniProt Primary Accession #** | Q9UHI5 |
| **UniProt Secondary Accession #** | Q86U05; Q9UKQ6; Q9UKQ7; Q9UKQ8; Q9Y445; B2R8Q4; B4DKT4; B4DTV6; D3DS46; F2Z2J4 |
| **UniProt Related Accession #** | Q9UHI5 |
| **GenBank Nucleotide #** | NM_012244.3 |
| **NCBI Official Full Name** | large neutral amino acids transporter small subunit 2 isoform a |
| **NCBI Official Synonym Full Names** | solute carrier family 7 (amino acid transporter light chain, L system), member 8 |
| **NCBI Official Symbol** | SLC7A8 |
| **NCBI Official Synonym Symbols** | LAT2; LPI-PC1 |
| **UniProt Protein Name** | Large neutral amino acids transporter small subunit 2 |
| **UniProt Synonym Protein Names** | L-type amino acid transporter 2; hLAT2; Solute carrier family 7 member 8 |
| **Protein Family** | Large neutral amino acids transporter |
| **UniProt Gene Name** | SLC7A8 |
| **UniProt Synonym Gene Names** | LAT2; hLAT2 |
| **UniProt Entry Name** | LAT2_HUMAN |

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| **NCBI Protein Information** | large neutral amino acids transporter small subunit 2 |
| **UniProt Comments for SLC7A8** | SLC7A8: 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. Belongs to the amino acid-polyamine-organocation (APC) superfamily. L-type amino acid transporter (LAT) (TC 2.A.3.8) family.<br><br>Protein type: Transporter, SLC family; Membrane protein, multi-pass; Transporter; Membrane protein, integral<br><br>Chromosomal Location of Human Ortholog: 14q11.2<br><br>Cellular Component: basolateral plasma membrane; cytoplasm; integral to plasma membrane; plasma membrane<br><br>Molecular Function: amino acid transmembrane transporter activity; antiporter activity; L-amino acid transmembrane transporter activity; neutral amino acid transmembrane transporter activity; organic cation transmembrane transporter activity; peptide antigen binding; protein binding; toxin transporter activity<br><br>Biological Process: amino acid metabolic process; amino acid transport; blood coagulation; ion transport; leukocyte migration; metal ion homeostasis; neutral amino acid transport; organic cation transport; response to toxin; transmembrane transport; transport |
| **Research Articles on SLC7A8** | **1.** Compared with the adult cerebral cortex, mRNAs encoding OATP1A2, OATP1C1, OATP3A1 variant 2, OATP4A1, LAT2 and CD98 were reduced in fetal cortex at different gestational ages, whilst mRNAs encoding MCT8, MCT10, OATP3A1 variant 1 and LAT1 were similar. |
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