bs-10125R **[Primary Antibody]**

SLC7A5 Rabbit pAb

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DATASHEET

Host: Rabbit **Isotype:** IgG

Clonality: Polyclonal

GeneID: 8140 **SWISS:** Q01650

Target: SLC7A5

Immunogen: KLH conjugated synthetic peptide derived from human SLC7A5: 101-200/507.

Purification: affinity purified by Protein A

Concentration: 1mg/ml

Storage: 0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
Shipped at 4°C. Store at -20°C for one year. Avoid repeated freeze/thaw cycles.

Background: L-type amino acid transporter 1 (LAT1) is a multipass-membrane protein responsible for sodium-independent, high-affinity transport of large neutral amino acids. LAT1 functions as a disulfide-linked heterodimer with the amino acid transport protein CD98. LAT1 is expressed predominantly in adult lung and liver but is also expressed in brain, thymus, retina, testis, placenta, bone marrow and fetal liver. In the retina, LAT1 localizes to the blood-retinal-barrier (BRB) and mediates L-leucine transport from the blood to the retina. The devastating effects on the brain caused by phenylketonuria are due to the increased levels of LAT1 on the blood-brain-barrier in response to high concentrations of phenylalanine in the blood. LAT1 accepts the amino-acid related anticancer agent melphalan and plays a significant role in cell proliferation, differentiation, and invasion in esophageal squamous cell carcinoma.

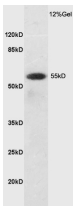
Applications: **WB** (1:500-2000)

Reactivity: Human (predicted: Mouse, Rat)

Predicted MW.: 55 kDa

Subcellular Location: Cell membrane ,Cytoplasm

VALIDATION IMAGES



Sample: Brain (Rat) Lysate at 40 ug Primary: Anti-SLC7A5 (bs-10125R) at 1/300 dilution Secondary: HRP conjugated Goat-Anti-rabbit IgG (bs-0295G-HRP) at 1/5000 dilution Predicted band size: 55 kD Observed band size: 55 kD

SELECTED CITATIONS

- **[IF=37.205]** Mayers, Jared R., et al. "Tissue of origin dictates branched-chain amino acid metabolism in mutant Kras-driven cancers." Science 353.6304 (2016): 1161-1165. WB ;Mouse. 27609895
- **[IF=15.304]** Haochen Guo. et al. Polymeric ligands comprising sulfur-containing amino acids for targeting tumor-associated amino acid transporters. BIOMATERIALS. 2023 Feb;293:121987 IHC ;Mouse. 36584445
- **[IF=6.77]** Beals, Joseph W., et al. "Anabolic sensitivity of postprandial muscle protein synthesis to the ingestion of a protein-dense food is reduced in overweight and obese young adults." The American Journal of Clinical Nutrition (2016): ajcn130385. WB ;="Pig". 27604771

- **[IF=6.208]** Sun-Yee Kim. et al. Genetic Ablation of LAT1 Inhibits Growth of Liver Cancer Cells and Downregulates mTORC1 Signaling. INT J MOL SCI. 2023 Jan;24(11):9171 WB ;Mouse,Human. 37298123
- **[IF=3.616]** C. Goldeman. et al. Human induced pluripotent stem cells (BIONi010-C) generate tight cell monolayers with blood-brain barrier traits and functional expression of large neutral amino acid transporter 1 (SLC7A5). Eur J Pharm Sci. 2021 Jan;156:105577 WB,ICC ;Human. 33011235