

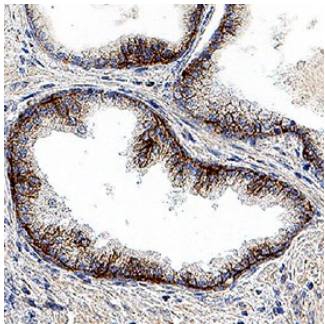
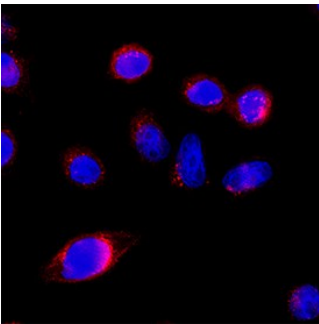
DESCRIPTION	
Species Reactivity	Human
Specificity	Detects a synthetic peptide specific for human SLC1A5 around amino acid 520 in Direct ELISA.
Source	Recombinant Monoclonal Rabbit IgG Clone # 3085B
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Synthetic Peptide Accession # Q9JKD8
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.

	Recommended Concentration	Sample
Immunocytochemistry	1-10 µg/mL	Immersion fixed SW480 human colorectal adenocarcinoma cell line
Immunohistochemistry	1-10 µg/mL	Immersion fixed paraffin-embedded sections of human prostate

DATA

<p>Immunohistochemistry</p>  <p>Detection of SLC1A5 in Human Prostate. SLC1A5 was detected in immersion fixed paraffin-embedded sections of human prostate using Rabbit Anti-Human SLC1A5 Monoclonal Antibody (Catalog # mab11628) at 3 µg/ml for 1 hour at room temperature followed by incubation with the Anti-Rabbit IgG VisUCyte™ HRP Polymer Antibody (Catalog # VC003). Before incubation with the primary antibody, tissue was subjected to heat-induced epitope retrieval using VisUCyte Antigen Retrieval Reagent-Basic (Catalog # VCTS021). Tissue was stained using DAB (brown) and counterstained with hematoxylin (blue). Specific staining was localized to the cell surface. View our protocol for IHC Staining with VisUCyte HRP Polymer Detection Reagents.</p>	<p>Immunocytochemistry</p>  <p>Detection of SLC1A5 in SW480 Human Cell Line. SLC1A5 was detected in immersion fixed SW480 human colorectal adenocarcinoma cell line using Rabbit Anti-Human SLC1A5 Monoclonal Antibody (Catalog # MAB11628) at 3 µg/ml for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Rabbit IgG Secondary Antibody (red; Catalog # NL004) and counterstained with DAPI (blue). Specific staining was localized to the cell surface. View our protocol for Fluorescent ICC Staining of Cells on Coverslips.</p>
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PREPARATION AND STORAGE

Reconstitution	Reconstitute lyophilized material at 0.2mg/ml in sterile PBS. For liquid material, refer to CoA for concentration.
Shipping	Lyophilized product is shipped at ambient temperature. Liquid small pack size (-SP) is shipped with polar packs. Upon receipt, store immediately at the temperature recommended below.
Stability & Storage	<p>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</p> <ul style="list-style-type: none"> • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

SLC1A5 is a sodium dependent antiporter also known as ASCT2 (ASC amino acid Transporter2). It is a member of the solute carrier (SLC) superfamily of transporters and plays an important role in tumors. It is one of the 3 proteins, including SLC7A5 and SLC3A2, that are among the highest differentially expressed genes in activated lymphocytes and cancerous cells. Pharmacological inhibition of SLC1A5 was found to abrogate the effector functions of NK cells. In a pancancer analysis of SLC1A5, it has been demonstrated to be a prognostic biomarker in cancer patients.

References:

1. Nachef M, Ali AK, Almutairi SM, Lee SH. Targeting SLC1A5 and SLC3A2/SLC7A5 as a Potential Strategy to Strengthen Anti-Tumor Immunity in the Tumor Microenvironment. *Front Immunol.* 2021 Apr 19;12:624324. doi: 10.3389/fimmu.2021.624324. PMID: 33953707; PMCID: PMC8089370.
2. Chen P, Jiang Y, Liang J, Cai J, Zhuo Y, Fan H, Yuan R, Cheng S, Zhang Y. SLC1A5 is a novel biomarker associated with ferroptosis and the tumor microenvironment: a pancancer analysis. *Aging (Albany NY).* 2023 Aug 10;15(15):7451-7475. doi: 10.18632/aging.204911. Epub 2023 Aug 10. PMID: 37566748; PMCID: PMC10457057.