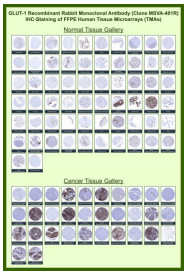
GLUT1 Antibody for IHC / SLC2A1 Immunohistochemistry Antibody [clone MSVA-401R] (V6112)

Catalog No.	Formulation	Size
V6112-100UG	Antibody in 1X PBS with 0.05% BSA, 0.05% sodium azide	100 ug
V6112-20UG	Antibody in 1X PBS with 0.05% BSA, 0.05% sodium azide	20 ug

Recombinant RABBIT MONOCLONAL

Bulk quote request

Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG, kappa
Clone Name	MSVA-401R
UniProt	P11166
Localization	Cell membrane, Melanosome, Photoreceptor inner segment
Applications	Immunohistochemistry (FFPE) : 1:100-1:200
Limitations	This SLC2A1/GLUT1 antibody is available for research use only.



GLUT1 Antibody for IHC Tissue Microarray (TMA). Immunohistochemistry analysis of glucose transporter 1 GLUT1, also known as SLC2A1, in formalin-fixed paraffin-embedded human normal and cancer tissue microarrays using recombinant rabbit monoclonal GLUT1 antibody clone MSVA-401R. Tissue microarray (TMA) staining with HRP-DAB brown chromogen demonstrates membranous and cytoplasmic localization in metabolically active cell populations. In normal tissues, signal is observed in erythrocytes and endothelial cells, while many other tissue types show minimal staining. Within tumor tissue microarrays, strong membranous GLUT1 expression highlights cancer cells across multiple malignancies, consistent with increased glucose transport and metabolic adaptation under hypoxic conditions. The reproducible staining patterns observed across the TMA panel align with reported SLC2A1 protein distribution data in the Human Protein Atlas.

Description

Glucose transporter 1 (SLC2A1), commonly known as GLUT1, is a facilitative glucose transporter responsible for basal glucose uptake in many tissues and plays an important role in cellular metabolism. GLUT1 Antibody for IHC / SLC2A1

Immunohistochemistry Antibody enables immunohistochemical detection of this membrane-associated transporter in formalin-fixed, paraffin-embedded (FFPE) tissue sections and supports analysis of GLUT1 expression patterns in normal tissues and tumors. In immunohistochemistry staining, GLUT1 typically appears as membranous or membranous-cytoplasmic signal in cells with high metabolic demand, reflecting localization of the transporter in the plasma membrane where it mediates glucose uptake. Because GLUT1 expression is closely linked to cellular metabolic activity, immunohistochemistry staining frequently highlights tumor cells and metabolically active tissues within histological sections.

Immunohistochemistry evaluation of SLC2A1 is widely used in pathology research to examine tumor metabolism and hypoxia-associated signaling pathways. Many malignant tumors upregulate GLUT1 expression as part of metabolic reprogramming that supports rapid cell proliferation and adaptation to hypoxic microenvironments. As a result, GLUT1 immunohistochemistry staining often demonstrates strong membranous labeling in tumor cells within FFPE tissue sections. This characteristic staining pattern makes a GLUT1 Antibody for IHC useful for visualizing glucose transporter expression directly within the architectural context of tumor tissues and for evaluating metabolic features of cancer cells.

Large-scale immunohistochemistry analysis of GLUT1 expression is frequently performed using human tissue microarray (TMA) panels containing numerous normal and cancer tissues. Tissue microarrays allow simultaneous immunohistochemical staining of dozens or hundreds of tissue cores under identical experimental conditions, enabling direct comparison of protein expression patterns across different organs and tumor types. Using a SLC2A1 immunohistochemistry antibody in human tissue microarray (TMA) studies provides a powerful approach for assessing staining specificity, confirming expected cellular localization, and evaluating GLUT1 distribution across a broad spectrum of tissues.

Immunohistochemistry staining of GLUT1 in TMA panels commonly demonstrates membranous labeling in tumor cell populations while many normal tissues show minimal or restricted staining patterns. Such tissue microarray-based analysis provides valuable context for interpreting GLUT1 expression patterns and supports reproducible evaluation of staining results across large numbers of samples. Because tissue microarrays include both normal tissues and tumor specimens, TMA immunohistochemistry data can highlight disease-associated expression patterns and provide insight into metabolic alterations occurring in cancer.

GLUT1 Antibody for IHC / SLC2A1 Immunohistochemistry Antibody supports immunohistochemical detection of glucose transporter 1 in FFPE tissues and tissue microarrays and enables visualization of GLUT1 expression patterns across a wide range of normal and cancer tissues. Immunohistochemistry staining using a GLUT1 antibody therefore provides a valuable tool for investigating tumor metabolism, hypoxia-associated signaling, and the tissue distribution of SLC2A1 expression in pathology and biomedical research.

Application Notes

1. Optimal dilution of the GLUT1 Antibody for IHC / SLC2A1 Immunohistochemistry Antibody should be determined by the researcher.

2. This SLC2A1/GLUT1 antibody is recombinantly produced by expression in human HEK293 cells.

3. Manual Protocol: Freshly cut sections should be used (less than 10 days between cutting and staining). Heat-induced antigen retrieval for 5 minutes in an autoclave at 121oC in pH 7.8 Target Retrieval Solution buffer. Apply the antibody at a dilution of 1:150 at 37oC for 60 minutes. Visualization of bound antibody by the EnVision Kit (Dako, Agilent) according to the manufacturer's directions.

Immunogen

A recombinant fragment of human GLUT1 protein (around amino acids 203-305) (exact sequence is proprietary) was used as the immunogen for the GLUT1 Antibody for IHC.

Storage

SLC2A1/GLUT1 antibody with sodium azide - store at 2 to 8oC; antibody without sodium azide - store at -20 to -80oC.

Alternate Names

Glucose transporter 1 antibody, SLC2A1 antibody, GLUT-1 antibody, Erythrocyte glucose transporter antibody

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