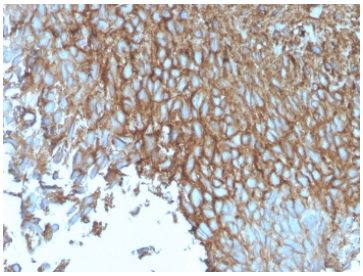
GLUT1 Antibody Recombinant Mouse MAb rGLUT1/2476 / SLC2A1 Glucose Transporter [clone rGLUT1/2476] (V8082)

Catalog No.	Formulation	Size
V8082-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V8082-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V8082SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Recombinant MOUSE MONOCLONAL

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Recombinant Mouse Monoclonal
Isotype	Mouse IgG1, kappa
Clone Name	rGLUT1/2476
Purity	Protein G affinity chromatography
UniProt	P11166
Localization	Cell surface
Applications	Immunohistochemistry (FFPE): 1-2ug/ml
Limitations	This recombinant GLUT1 antibody is available for research use only.



GLUT1 Antibody Recombinant Mouse MAb rGLUT1/2476. Immunohistochemistry analysis of GLUT1 / SLC2A1 in FFPE human bladder tissue demonstrates strong HRP-DAB brown membranous staining in epithelial cells consistent with the plasma membrane localization of the GLUT1 glucose transporter. The staining outlines cell borders across the epithelial layer, highlighting the characteristic membrane-associated distribution of this facilitative glucose transporter in metabolically active cells. Adjacent stromal components show minimal staining, providing contrast to the epithelial signal. Heat induced epitope retrieval was performed by boiling tissue sections in pH 9 10mM Tris buffer with 1mM EDTA for 20 minutes followed by cooling prior to antibody incubation.

Description

Glucose transporter 1 (SLC2A1), commonly referred to as GLUT1, is a facilitative glucose transporter responsible for basal glucose uptake in many tissues and plays a central role in cellular energy metabolism. GLUT1 Antibody Recombinant Mouse MAb rGLUT1/2476 recognizes the SLC2A1 protein and is produced using recombinant monoclonal antibody technology designed to provide consistent antibody performance and reproducible target recognition. As a recombinant mouse monoclonal antibody, rGLUT1/2476 is generated from a defined antibody sequence expressed through recombinant systems, allowing controlled production of the antibody with uniform binding characteristics across manufacturing batches. This recombinant monoclonal design helps ensure reliable recognition of the GLUT1 glucose transporter in research studies investigating cellular metabolism and membrane transporter biology.

GLUT1 is primarily localized to the plasma membrane where it mediates facilitated diffusion of glucose into cells, allowing tissues to maintain energy production through glycolysis and oxidative metabolism. Because glucose uptake is essential for many physiological processes, SLC2A1 is widely expressed in metabolically active tissues including erythrocytes, endothelial cells, and epithelial cell populations requiring continuous glucose supply. Detection of GLUT1 therefore provides insight into glucose transport activity and metabolic regulation across diverse cell types.

The recombinant mouse monoclonal antibody format used to produce rGLUT1/2476 offers advantages associated with sequence-defined antibody reagents. Recombinant monoclonal antibodies are derived from a single defined antibody sequence that can be reproduced through recombinant expression systems, helping maintain consistent antibody specificity and reducing variability associated with hybridoma-derived reagents. As a result, recombinant monoclonal antibodies such as GLUT1 Antibody Recombinant Mouse MAb rGLUT1/2476 are well suited for research applications that require reproducible antibody performance and reliable target detection.

GLUT1 expression is frequently elevated in rapidly proliferating cells and many tumor types where increased glucose uptake supports enhanced metabolic activity. Upregulation of SLC2A1 is commonly associated with metabolic reprogramming and adaptation to hypoxic conditions in cancer cells. Because of its involvement in cellular metabolism and glucose transport, GLUT1 is widely studied in investigations of tumor metabolism, metabolic signaling pathways, and cellular energy regulation.

GLUT1 Antibody Recombinant Mouse MAb rGLUT1/2476 therefore provides a sequence-defined recombinant monoclonal reagent for detecting the SLC2A1 glucose transporter. The recombinant mouse monoclonal antibody design supports consistent antibody performance and reliable recognition of GLUT1 in studies examining glucose transport, cellular metabolism, and metabolic adaptation in normal physiology and disease research.

Application Notes

Optimal dilution of the GLUT1 Antibody Recombinant Mouse MAb rGLUT1/2476 should be determined by the researcher.

Immunogen

A recombinant human partial protein (amino acids 203-305) was used as the immunogen for this GLUT1 Antibody Recombinant Mouse MAb rGLUT1/2476.

Storage

Store the recombinant GLUT1 antibody at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).

Alternate Names

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

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