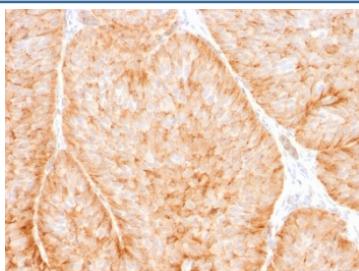


GLUT1 Antibody [clone GLUT1/2475] (V3919)

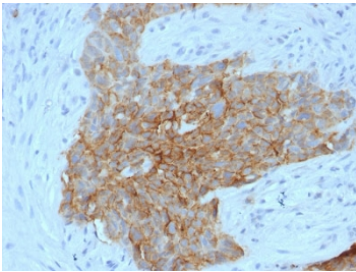
Catalog No.	Formulation	Size
V3919-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V3919-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V3919SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

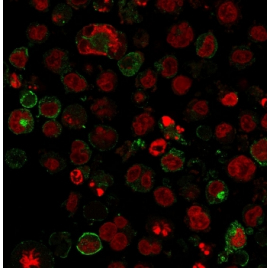
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG2b, kappa
Clone Name	GLUT1/2475
Purity	Protein G affinity chromatography
UniProt	P11166
Localization	Cell surface, cytoplasm
Applications	ELISA : 1-2ug/ml for coating (order BSA/sodium azide-free format) Flow Cytometry : 1-2ug/million cells Immunofluorescence : 1-2ug/ml Western Blot : 1-2ug/ml Immunohistochemistry (FFPE) : 1-2ug/ml for 30 min at RT
Limitations	This GLUT1 antibody is available for research use only.



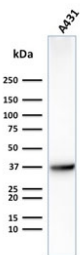
IHC testing of human bladder carcinoma with GLUT1 antibody (clone GLUT1/2475). Required HIER: boil tissue sections in pH 9 10mM Tris with 1mM EDTA for 10-20 min followed by cooling at RT for 20 min.



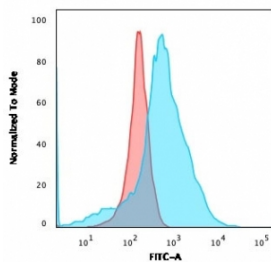
IHC testing of human tongue with GLUT1 antibody (clone GLUT1/2475). Required HIER: boil tissue sections in pH 9 10mM Tris with 1mM EDTA for 10-20 min followed by cooling at RT for 20 min.



Immunofluorescent staining of human K562 cells with GLUT1 antibody (green, clone GLUT1/2475) and Reddot nuclear stain (red).

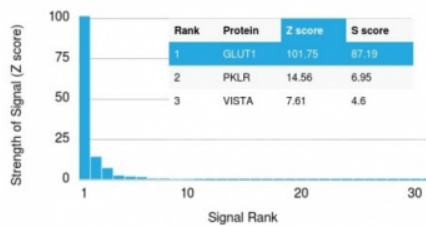


Western blot testing of human A431 cells with GLUT1 antibody (clone GLUT1/2475). Expected molecular weight: 45-55 kDa.

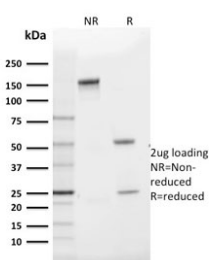


Flow cytometry testing of human K562 cells with GLUT1 antibody (clone GLUT1/2475); Red=isotype control, Blue= GLUT1 antibody.

Human Protein Microarray Specificity Validation



Analysis of HuProt(TM) microarray containing more than 19,000 full-length human proteins using GLUT1 antibody (clone GLUT1/2475). These results demonstrate the foremost specificity of the GLUT1/2475 mAb. Z- and S- score: The Z-score represents the strength of a signal that an antibody (in combination with a fluorescently-tagged anti-IgG secondary Ab) produces when binding to a particular protein on the HuProt(TM) array. Z-scores are described in units of standard deviations (SD) above the mean value of all signals generated on that array. If the targets on the HuProt(TM) are arranged in descending order of the Z-score, the S-score is the difference (also in units of SD) between the Z-scores. The S-score therefore represents the relative target specificity of an Ab to its intended target.



SDS-PAGE analysis of purified, BSA-free GLUT1 antibody (clone GLUT1/2475) as confirmation of integrity and purity.

Description

GLUT1 antibody detects glucose transporter type 1, encoded by the SLC2A1 gene. GLUT1 is a facilitative glucose transporter expressed in many tissues and is especially important in barrier sites such as the blood-brain barrier and erythrocyte membranes. By mediating basal glucose uptake, GLUT1 supports cellular energy supply, metabolic regulation, and tissue homeostasis. Its wide expression and critical functions have made GLUT1 a target in metabolism research, cancer biology, and neurology.

Structurally, GLUT1 is a transmembrane protein with 12 predicted membrane-spanning helices that form a pore for glucose passage. The transporter undergoes conformational changes between inward- and outward-facing states to shuttle glucose across membranes. GLUT1 exhibits high affinity for glucose and can also transport other hexoses. Its regulation is influenced by cellular energy status and signaling pathways such as PI3K-AKT and AMPK, which adjust glucose availability according to metabolic demand.

The GLUT1 antibody clone GLUT1/2475 provides reproducible and specific recognition of this transporter. Clone GLUT1/2475 has been cited in peer-reviewed studies examining glucose metabolism in cancer, hypoxia responses in brain tissues, and erythrocyte membrane biology. Its consistent performance makes it an essential tool for both laboratory research and translational studies.

Research using clone GLUT1/2475 has clarified how cancer cells upregulate GLUT1 to meet increased metabolic needs, supporting the concept of metabolic reprogramming. In diagnostic pathology, GLUT1 expression helps identify tumors with altered glucose uptake, including carcinomas, gliomas, and hemangioblastomas. In neurology, GLUT1 deficiency syndrome results from mutations in SLC2A1, causing seizures and developmental delay, and antibodies like clone GLUT1/2475 support investigations into this disorder.

NSJ Bioreagents supplies this GLUT1 antibody to support studies of metabolism, oncology, and neurological disease. Alternate names include SLC2A1 antibody, solute carrier family 2 member 1 antibody, blood-brain barrier glucose transporter antibody, erythrocyte glucose transporter antibody, and facilitated glucose transporter 1 antibody.

Application Notes

Optimal dilution of the GLUT1 antibody should be determined by the researcher.

Immunogen

A portion of amino acids 203-305 from the human protein was used as the immunogen for this GLUT1 antibody.

Storage

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