

DESCRIPTION

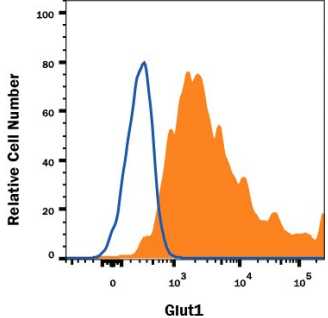
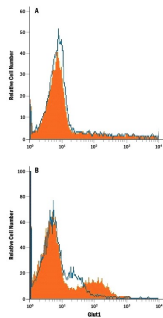
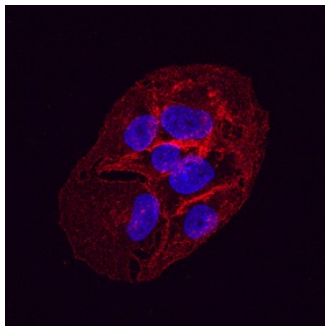
Species Reactivity	Human
Specificity	Detects human Glut1. Stains human Glut1-transfected NS0 cells, but not NS0 control transfectants. Although Human Glut1 Antibody detects Glut1 on the surface of T cells (1, 2), it does not detect it on erythrocytes (5). The reason for this discrepancy is not understood, but may be related to conformational or post-translational modification differences.
Source	Monoclonal Mouse IgG _{2B} Clone # 202915
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	NS0 mouse myeloma cell line transfected with human Glut1 Met1-Val492 Accession # AAA52571
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

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
Flow Cytometry	0.25 µg/10 ⁶ cells	See Below
Immunocytochemistry	8-25 µg/mL	See Below
CyTOF-ready	Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.	

DATA

<p>Flow Cytometry</p>  <p>Detection of Glut1 in HepG2 Human Cell Line by Flow Cytometry. HepG2 human hepatocellular carcinoma cell line was stained with Mouse Anti-Human Glut1 Monoclonal Antibody (Catalog # MAB1418, filled histogram) or isotype control antibody (Catalog # MAB0041, open histogram), followed by Allophycocyanin-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # F0101B).</p>	<p>Flow Cytometry</p>  <p>Detection of Glut1 in Jurkat Human Cell Line by Flow Cytometry. Jurkat human acute T cell leukemia cell line either (A) untreated or (B) cultured in nutrient-depleted media was stained with Mouse Anti-Human Glut1 Monoclonal Antibody (Catalog # MAB1418, filled histogram) or isotype control antibody (Catalog # MAB0041, open histogram), followed by Phycoerythrin-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # F0102B).</p>
<p>Immunocytochemistry</p>  <p>Glut1 in HepG2 Human Hepatocellular Carcinoma Cell Line. Glut1 was detected in immersion fixed HepG2 human hepatocellular carcinoma cell line using Mouse Anti-Human Glut1 Monoclonal Antibody (Catalog # MAB1418) at 10 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Mouse IgG Secondary Antibody (red; Catalog # NL007) and counterstained with DAPI(blue). Specific staining was localized to the plasma membrane. View our protocol for Fluorescent ICC Staining of Cells on Coverslips.</p>	

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <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

Glut1 belongs to the facilitative glucose transport protein family that comprises 13 members. It is an integral membrane protein with 12 transmembrane domains and is expressed at variable levels in many tissues including brain endothelial cells, CD8⁺ T cells, and erythrocytes (1-4). Glut1 is a major glucose transporter that mediates glucose transport across the mammalian blood-brain barrier.

References:

1. Mueckler, M. *et al.* 1994, Eur. J. Biochem. **219**:713.
2. Meuckler, M. *et al.* 1985, Science **229**:941.
3. Jones, K.S. *et al.* 2006, J. Virol. 8291.
4. Takenouchi, N. *et al.* 2007, J. Virol. 1506.
5. Kinet, S. *et al.* 2007, Retrovirology **4**:31.