Alexa Fluor® 647 Mouse Anti-Human GLUT1

Product Information

Material Number: 566580
Alternate Name: SLC2A1; GLUT-1; Glut; GTR1; PED; HTLVR
Size: 25 µg
Concentration: 0.2 mg/ml
Clone: 202915
Immunogen: Human GLUT1-transfected cells
Isotype: Mouse IgG2b, κ
Reactivity: QC Testing: Human
Storage Buffer: Aqueous buffered solution containing ≤0.09% sodium azide.

Description

The monoclonal antibody 202915 specifically recognizes Glucose transporter 1 (GLUT1) that is encoded by SLC2A1 (Solute carrier family 2, facilitated glucose transporter member 1). GLUT1 serves as a transporter for glucose and other aldose sugars and oxidized ascorbic acid (vitamin C) into cells. GLUT1 is also known as the Receptor for HTLV-1 and HTLV-2 (HTLVR). Structural studies suggest that GLUT1 is a twelve-pass transmembrane glycoprotein (12TM) with cytoplasmic N- and C-termini. GLUT1 plays an important role in the glycolytic pathway by transporting glucose across the plasma membranes of cells. GLUT1 is differentially expressed on a wide variety of normal cells including erythrocytes, blood-brain barrier endothelial cells, astrocytes, adipocytes, cardiomyocytes, lymphocytes and other leukocytes, as well as by tumor cells and cell lines.

Preparation and Storage

Store undiluted at 4°C and protected from prolonged exposure to light. Do not freeze.

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography. The antibody was conjugated to Alexa Fluor® 647 under optimum conditions, and unreacted Alexa Fluor® 647 was removed.

Application Notes

Application

Flow cytometry Routinely Tested

Suggested Companion Products

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>Name</th>
<th>Size</th>
<th>Clone</th>
</tr>
</thead>
<tbody>
<tr>
<td>565378</td>
<td>Alexa Fluor® 647 Mouse IgG2b, κ Isotype Control</td>
<td>50 µg</td>
<td>27-35</td>
</tr>
<tr>
<td>554656</td>
<td>Stain Buffer (FBS)</td>
<td>500 mL</td>
<td>(none)</td>
</tr>
<tr>
<td>554657</td>
<td>Stain Buffer (BSA)</td>
<td>500 mL</td>
<td>(none)</td>
</tr>
</tbody>
</table>

Flow cytometric analysis of human GLUT1 expression on human HEP G2 cells. Cells from the human Hep G2 (Hepatocellular carcinoma, ATCC HB-8065) cell line were stained with either Alexa Fluor® 647 Mouse IgG2b, κ (Cat. No. 565378; dashed line histogram) or Alexa Fluor® 647 Mouse Anti-Human GLUT1 antibody (Cat. No. 566580; solid line histogram) at 0.5 μg/test. The flow cytometric histogram showing the expression of GLUT1 (or Ig Isotype control staining) was derived from gated events with the forward and side light-scatter characteristics of viable cells. Flow cytometric analysis was performed using a BD FACSCanto™ II Flow Cytometer System. Data shown on this Technical Data Sheet are not lot specific.
Product Notices
1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. An isotype control should be used at the same concentration as the antibody of interest.
3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
4. The Alexa Fluor®, Pacific Blue™, and Cascade Blue® dye antibody conjugates in this product are sold under license from Molecular Probes, Inc. for research use only, excluding use in combination with microarrays, or as analyte specific reagents. The Alexa Fluor® dyes (except for Alexa Fluor® 430), Pacific Blue™ dye, and Cascade Blue® dye are covered by pending and issued patents.
5. Alexa Fluor® is a registered trademark of Molecular Probes, Inc., Eugene, OR.
6. Alexa Fluor® 647 fluorochrome emission is collected at the same instrument settings as for allophycocyanin (APC).
7. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at wwwbdbiosciencescomcolors.
8. Please refer to wwwbdbiosciencescompharmingenprotocols for technical protocols.

References
Carruthers A, DeZutter J, Ganguly A, Devaskar S. Will the original glucose transporter isoform please stand up!. Amer J Physiol Endocrinol Metab. 2009; 297(4):E836-848. (Biology)
Chan O, Burke JD, Gao DF, Fish EN. The chemokine CCL5 regulates glucose uptake and AMP kinase signaling in activated T cells to facilitate chemotaxis. J Biol Chem. 2012; 287(35):29406-29416. (Biology)