**Glut1 (D3J3A) Rabbit mAb**

For Research Use Only. Not For Use In Diagnostic Procedures.

### Applications and Species Cross-Reactivity

<table>
<thead>
<tr>
<th>Applications</th>
<th>Species Cross-Reactivity</th>
<th>Molecular Wt.</th>
<th>Isotype</th>
</tr>
</thead>
<tbody>
<tr>
<td>W, IP</td>
<td>H, M, R</td>
<td>45-60 kDa</td>
<td>Rabbit IgG**</td>
</tr>
</tbody>
</table>

*Species cross-reactivity is determined by western blot.

**Anti-rabbit secondary antibodies must be used to detect this antibody.**

**Recommended Antibody Dilutions:**

- Western blotting: 1:1000
- Immunoprecipitation: 1:50

For product specific protocols and a complete listing of recommended companion products please see the product web page at www.cellsignal.com

**Background:** Glucose transporter 1 (Glut1, SLC2A1) is a widely expressed transport protein that displays a broad range of substrate specificity in transporting a number of different aldose sugars as well as an oxidized form of vitamin C into cells (1,2). Glut1 is responsible for the basal-level uptake of glucose from the blood through facilitated diffusion (2). Research studies show that Glut1 and the transcription factor HIF-1α mediate the regulation of glycolysis by O-GlcNAcylation in cancer cells (3). Additional studies demonstrate that Glut1 is required for CD4 T cell activation and is critical for the expansion and survival of T effector (Teff) cells (4). Mutations in the corresponding SLC2A1 gene cause GLUT1 deficiency syndromes (GLUT1DS1, GLUT1DS2), a pair of neurologic disorders characterized by delayed development, seizures, spasticity, paroxysmal exercise-induced dyskinesia, and acquired microcephaly (5,6). Two other neurologic disorders - dystonia-9 (DYT9) and susceptibility to idiopathic generalized epilepsy 12 (IGI2) - are also caused by mutations in the SLC2A1 gene (7,8).

**Specificity/Sensitivity:** Glut1 (D3J3A) Rabbit mAb recognizes endogenous levels of total Glut1 protein.

**Source/Purification:** Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Leu260 of human Glut1 protein.

**Background References:**


**Storage:** Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at –20°C. Do not aliquot the antibody.

**IMPORTANT:** For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween®20 at 4°C with gentle shaking, overnight.

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Applications: W—Western  IP—Immunoprecipitation  IHC—Immunohistochemistry  ChIP—Chromatin Immunoprecipitation  IF—Immunofluorescence  F—Flow cytometry  E-P—ELISA-Peroxidase  Species Cross-Reactivity: H—human  M—mouse  R—rat  Hr—hormone  Mm—monkey  Xi—Xenopus  Dm—D. melanogaster  Xe—E. coli  B—bovine  Dq—dog  Pg—pig  Se—S. cerevisiae  Ce—C. elegans  Mt—M. truncatus  All—all species expected. Species enclosed in parentheses are predicted to react based on 100% homology.