

Glucose Transporter GLUT1 Recombinant Antibody [SA0377] - Rat IgG1 (Chimeric)

HA601521



Product Type:	Recombinant Chimeric Antibody, primary antibodies
Species reactivity:	Human, Mouse, Rat
Applications:	IHC-Fr, IHC-P, IF-Tissue, WB
Molecular Wt:	Predicted band size: 54 kDa
Clone number:	SA0377

Description: Glucose transporter 1 (or GLUT1), also known as solute carrier family 2, facilitated glucose transporter member 1 (SLC2A1), is a uniporter protein that in humans is encoded by the SLC2A1 gene. GLUT1 facilitates the transport of glucose across the plasma membranes of mammalian cells. This gene encodes a major glucose transporter in the mammalian blood-brain barrier. The encoded protein is found primarily in the cell membrane and on the cell surface, where it can also function as a receptor for human T-cell leukemia virus (HTLV) I and II. One good source of GLUT1 is erythrocyte membranes. GLUT1 accounts for 2 percent of the protein in the plasma membrane of erythrocytes. GLUT1, found in the plasma membrane of erythrocytes, is a classic example of a uniporter. After glucose is transported into the erythrocyte, it is rapidly phosphorylated, forming glucose-6-phosphate, which cannot leave the cell. Mutations in this gene can cause GLUT1 deficiency syndrome 1, GLUT1 deficiency syndrome 2, idiopathic generalized epilepsy 12, dystonia 9, and stomatin-deficient cryohydrocytosis.

Immunogen: Synthetic peptide within Human GLUT1 aa 443-492 / 492.

Positive control: Human liver tissue, mouse liver tissue, HeLa cell lysate, HT-29 cell lysate, PC-12 cell lysate, Mouse liver tissue lysate.

Subcellular location: Cell membrane, Melanosome

Database links: SwissProt: P11166 Human | P17809 Mouse | P11167 Rat

Recommended Dilutions:

IHC-Fr	1:500
IHC-P	1:2,000-1:5,000
IF-Tissue	1:500-1:1,000
WB	1:50,000

Storage Buffer: 1*PBS (pH7.4), 0.1% BSA, 40% Glycerol, 0.2% Proclean 950.

Storage Instruction: Shipped at 4°C. Store at +4°C short term (1-2 weeks). Store at -20°C long term.

Purity: Protein A affinity purified.

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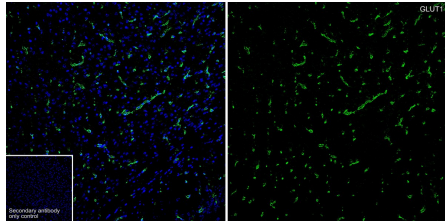
Orders:0086-571-88062880

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Images

**Fig1:** Application: IHC-Fr

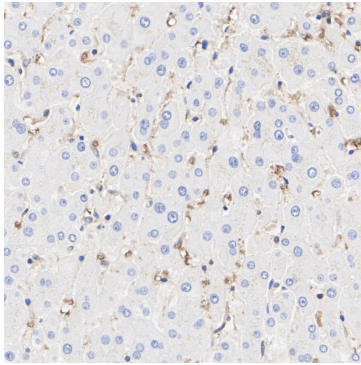
Species: Mouse

Site: brain

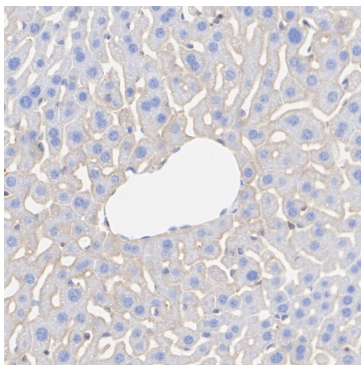
Sample: Frozen section

Antibody concentration: 1/500

Antigen retrieval: Not required

**Fig2:** Immunohistochemical analysis of paraffin-embedded human liver tissue with Rat anti-Glucose Transporter GLUT1 antibody (HA601521) at 1/5,000 dilution.

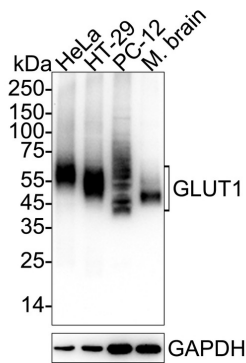
The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH₂O and PBS, and then probed with the primary antibody (HA601521) at 1/5,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

**Fig3:** Immunohistochemical analysis of paraffin-embedded mouse liver tissue with Rat anti-Glucose Transporter GLUT1 antibody (HA601521) at 1/2,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH₂O and PBS, and then probed with the primary antibody (HA601521) at 1/2,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

Fig4: Western blot analysis of Glucose Transporter GLUT1 on different lysates with Rat anti-Glucose Transporter GLUT1 antibody (HA601521) at 1/50,000 dilution.

Lane 1: HeLa cell lysate (no heat)
 Lane 2: HT-29 cell lysate (no heat)
 Lane 3: PC-12 cell lysate (no heat)
 Lane 4: Mouse liver tissue lysate (no heat)



Notice: no heat means the lysate is not boiled.

Lysates/proteins at 10 µg/Lane.

Predicted band size: 54 kDa
 Observed band size: 45-60 kDa

Exposure time: 25 seconds; ECL: K1801;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (HA601521) at 1/50,000 dilution was used in primary antibody dilution (K1803) at 4°C overnight. Goat Anti-Rat IgG H&L - HRP Secondary Antibody (HA1023) at 1/50,000 dilution was used for 1 hour at room temperature.

Note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

Background References

1. Boyer-Di Ponio J et al. Instruction of circulating endothelial progenitors in vitro towards specialized blood-brain barrier and arterial phenotypes. PLoS One 9:e84179 (2014).
2. Saucillo DC et al. Leptin metabolically licenses T cells for activation to link nutrition and immunity. J Immunol 192:136-44 (2014).

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