

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

# HA601621



<b>Product Type:</b>	Recombinant Chimeric Antibody, primary antibodies
<b>Species reactivity:</b>	Human, Mouse, Rat
<b>Applications:</b>	WB, IHC-Fr, IHC-P, IF-Cell
<b>Molecular Wt:</b>	Predicted band size: 54 kDa
<b>Clone number:</b>	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:** HeLa (Human cervical adenocarcinoma cells) (no heat) cell lysates, mouse brain (no heat) tissue lysates.

**Subcellular location:** Cell membrane, Melanosome

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

**Recommended Dilutions:**

<b>WB</b>	1:5,000
<b>IHC-Fr</b>	1:500
<b>IHC-P</b>	1:5,000
<b>IF-Cell</b>	1:100

**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). It is recommended to aliquot into single-use upon delivery. Store at -20°C long term.

**Purity:** Protein A affinity purified.

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Orders:0086-571-88062880

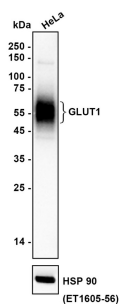
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## Images

**Fig1:** Western blot analysis of Glucose Transporter GLUT1 on HeLa (Human cervical adenocarcinoma cells) (no heat) cell lysate with Mouse anti-Glucose Transporter GLUT1 antibody (HA601621) at 1/50,000 dilution.



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Lysates/proteins at 10 µg/Lane.

Exposure time: 6 seconds; ECL: K1801

Blocking: 5% NFDM/TBST, 1 hour at room temperature

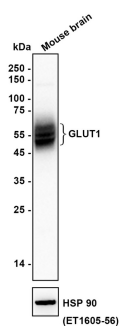
Primary antibody: HA601621, 1/50,000 in primary antibody dilution buffer (K1803), overnight at 4 °C

Secondary antibody: Goat anti-Mouse IgG-HRP (HA1006), 1/50,000 in 5% NFDM/TBST, 1 hour at room temperature

Predicted band size: 54 kDa

Observed band size: 42-55 kDa

**Fig2:** Western blot analysis of Glucose Transporter GLUT1 on mouse brain (no heat) tissue lysate with Mouse anti-Glucose Transporter GLUT1 antibody (HA601621) at 1/50,000 dilution.



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Lysates/proteins at 10 µg/Lane.

Exposure time: 6 seconds; ECL: K1801

Blocking: 5% NFDM/TBST, 1 hour at room temperature

Primary antibody: HA601621, 1/50,000 in primary antibody dilution buffer (K1803), overnight at 4 °C

Secondary antibody: Goat anti-Mouse IgG-HRP (HA1006), 1/50,000 in 5% NFDM/TBST, 1 hour at room temperature

Predicted band size: 54 kDa

Observed band size: 42-55 kDa

**Fig3:** Application: Immunofluorescence (IHC-Fr)

Species: Mouse

Tissue: Brain

Sample: Frozen section

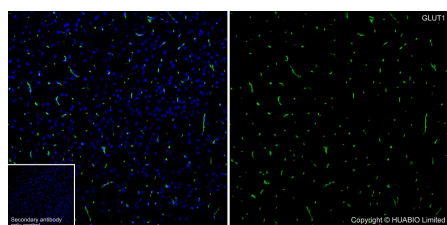
Antigen retrieval: Not required

Wash buffer: 1× TBST

Blocking: 10% normal goat serum + 1% Triton X-100 + 0.3 M Glycine in TBST, 30 minutes at room temperature.

Primary antibody: HA601621, 1/500, overnight at 4°C.

Secondary antibody: Goat Anti-Mouse IgG (iFluor™ 488, HA1125), 1.5 hours at room temperature.



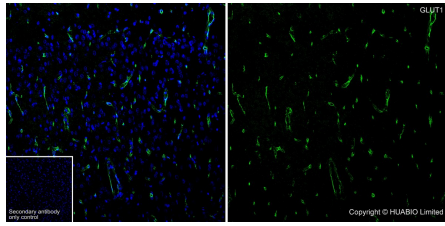
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**Fig4:** Application: Immunofluorescence (IHC-Fr)

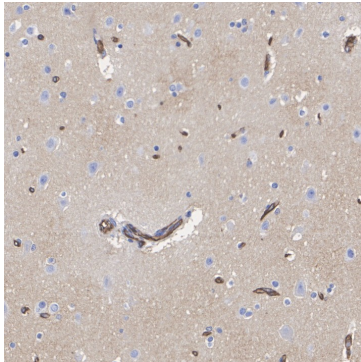
Species: Rat  
Tissue: Brain  
Sample: Frozen section

Antigen retrieval: Not required

Wash buffer: 1× TBST  
Blocking: 10% normal goat serum + 1% Triton X-100 + 0.3 M Glycine in TBST, 30 minutes at room temperature.  
Primary antibody: HA601621, 1/500, overnight at 4°C.  
Secondary antibody: Goat Anti-Mouse IgG (iFluor™ 488, HA1125), 1.5 hours at room temperature.

**Fig5:** Application: Immunohistochemistry (IHC-P)

Species: Human  
Tissue: Brain  
Sample: Paraffin-embedded section

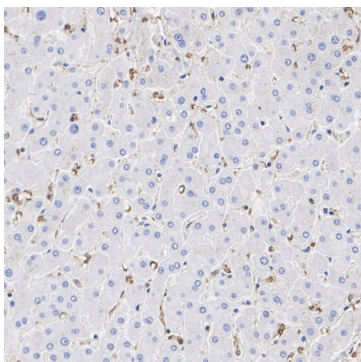


Antigen retrieval: Heat-mediated, Tris-EDTA buffer (pH 9.0), 20 minutes at 95°C.

Wash buffer: 1× TBST  
Endogenous peroxidase blocking: 3% H<sub>2</sub>O<sub>2</sub>, 10 minutes at room temperature.  
Blocking: 1% BSA + 10% normal goat serum, 10 minutes at room temperature.  
Primary antibody: HA601621, 1/5,000, 1 hour at room temperature.  
Secondary antibody: HA1120, 20 minutes at room temperature.

**Fig6:** Application: Immunohistochemistry (IHC-P)

Species: Human  
Tissue: Liver  
Sample: Paraffin-embedded section



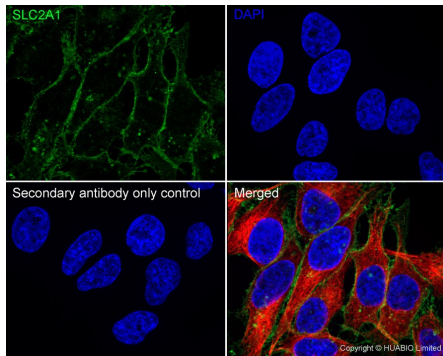
Antigen retrieval: Heat-mediated, Tris-EDTA buffer (pH 9.0), 20 minutes at 95°C.

Wash buffer: 1× TBST  
Endogenous peroxidase blocking: 3% H<sub>2</sub>O<sub>2</sub>, 10 minutes at room temperature.  
Blocking: 1% BSA + 10% normal goat serum, 10 minutes at room temperature.  
Primary antibody: HA601621, 1/5,000, 1 hour at room temperature.  
Secondary antibody: HA1120, 20 minutes at room temperature.

**Fig7:** Application: Immunocytochemistry (IF-cell)

Species: Human

Sample: HeLa (Human cervix adenocarcinoma epithelial cell)



Fixation: 4% Paraformaldehyde, 15 minutes at room temperature.  
Permeabilization: 0.1% Triton X-100, 15 minutes at room temperature.

Blocking: 1% BSA + 10% normal goat serum, 1 hour at room temperature.

Antibody dilution buffer: 1% BSA in PBST.

Primary antibody: HA601621, 1/100, overnight at 4°C.

Secondary antibody: Goat Anti-Mouse IgG (iFluor™ 488, HA1125), 45 minutes at room temperature.

Counterstain: Beta tubulin (ET1602-4, red), 1/100, overnight at 4°C. The Nuclear counterstain was DAPI (Blue).

**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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