Glucose Transporter GLUT1 Recombinant Antibody [SA0377] - Mouse IgG1 (Chimeric) - BSA and Azide free

HA610419

Product Type:	Recombinant Chimeric Antibody, primary antibodies
Species reactivity:	Human, Mouse, Rat
Applications:	WB, IHC-Fr, IHC-P, IF-Cell
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: 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:

WB	1:5,000
IHC-Fr	1:500
IHC-P	1:5,000
IF-Cell	1:100

Storage Buffer: PBS (pH7.4).

Storage Instruction: Store at +4℃ after thawing. Aliquot store at -20℃. Avoid repeated freeze / thaw cycles.

Purity: Protein A affinity purified.

Images

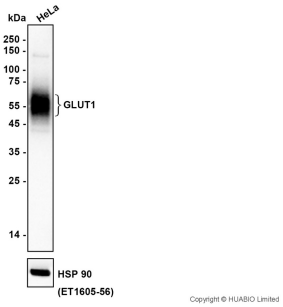

Fig1: Western blot analysis of Glucose Transporter GLUT1 on HeLa (Human cervical adenocarcinoma cells) (no heat) cell lysate with Mouse anti-Glucose Transporter GLUT1 antibody (HA610419) at 1/50,000 dilution.

Lysates/proteins at 10 µg/Lane.
Exposure time: 6 seconds; ECL: K1801

Blocking: 5% NFDM/TBST, 1 hour at room temperature
Primary antibody: HA610419, 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

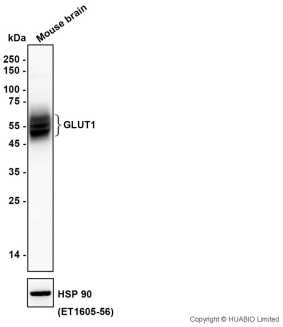

Fig2: Western blot analysis of Glucose Transporter GLUT1 on mouse brain (no heat) tissue lysate with Mouse anti-Glucose Transporter GLUT1 antibody (HA610419) at 1/50,000 dilution.

Lysates/proteins at 10 µg/Lane.
Exposure time: 6 seconds; ECL: K1801

Blocking: 5% NFDM/TBST, 1 hour at room temperature
Primary antibody: HA610419, 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

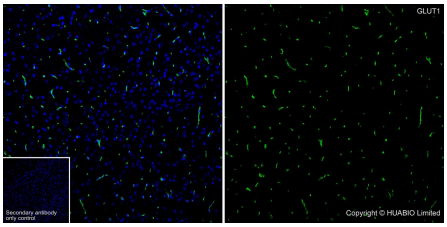

Fig3: Application: Immunofluorescence (IHC-Fr)

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: HA610419, 1/500, overnight at 4°C.
Secondary antibody: Goat Anti-Mouse IgG (iFluor™ 488, HA1125), 1.5 hours at room temperature.

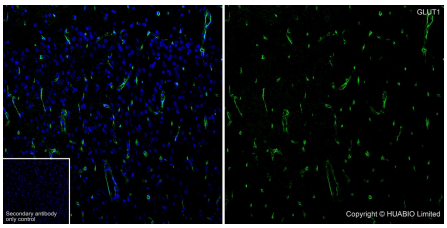

Fig4: Application: Immunofluorescence (IHC-Fr)

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: HA610419, 1/500, overnight at 4°C.
Secondary antibody: Goat Anti-Mouse IgG (iFluor™ 488, HA1125), 1.5 hours at room temperature.

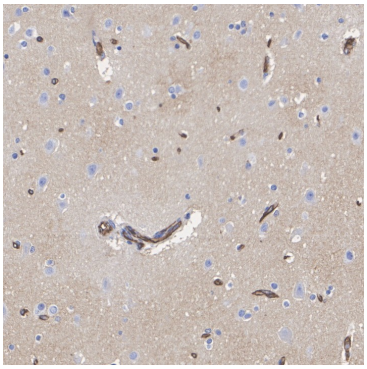

Fig5: Application: Immunohistochemistry (IHC-P)

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_2O_2, 10 minutes at room temperature.
Blocking: 1% BSA + 10% normal goat serum, 10 minutes at room temperature.
Primary antibody: HA610419, 1/5,000, 1 hour at room temperature.
Secondary antibody: HA1120, 20 minutes at room temperature.

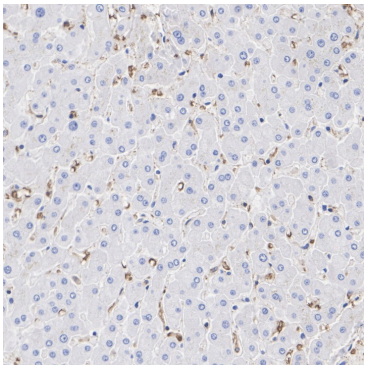

Fig6: Application: Immunohistochemistry (IHC-P)

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_2O_2, 10 minutes at room temperature.
Blocking: 1% BSA + 10% normal goat serum, 10 minutes at room temperature.
Primary antibody: HA610419, 1/5,000, 1 hour at room temperature.
Secondary antibody: HA1120, 20 minutes at room temperature.

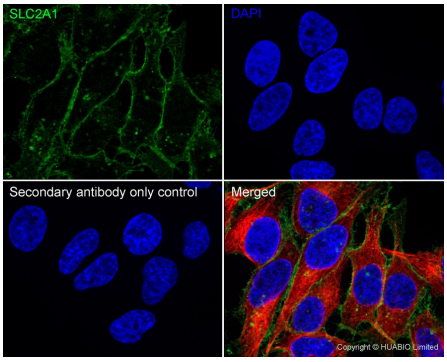

Fig7: Application: Immunocytochemistry (IF-cell)

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: HA610419, 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℃. The Nuclear counterstain was DAPI (Blue).

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).