

Anti-Glucose Transporter GLUT1 Antibody

ER1510-11



Product Type:	Rabbit polyclonal IgG, primary antibodies
Species reactivity:	Human, Mouse
Applications:	WB, IF-Cell, IHC-P, FC
Molecular Wt:	Predicted band size: 54 kDa

Description: Glucose is fundamental to the metabolism of mammalian cells. Its passage across cell membranes is mediated by a family of transporters termed glucose transporters or Gluts. In adipose and muscle tissue, insulin stimulates a rapid and dramatic increase in glucose uptake, which is largely due to the redistribution of the insulin-inducible glucose transporter, Glut4. In response to insulin, Glut4 is quickly shuttled from an intracellular storage site to the plasma membrane, where it binds glucose. In contrast, the ubiquitously expressed glucose transporter Glut1 is constitutively targeted to the plasma membrane, and shows a much less dramatic translocation in response to insulin. Glut1 and Glut4 are twelve-pass transmembrane proteins (12TM) whose carboxy-termini may dictate their cellular localization. Aberrant Glut4 expression has been suggested to contribute to such maladies as obesity and diabetes. Glut4 null mice have shown that while functional Glut4 protein is not required for maintaining normal glucose levels, it is necessary for sustained growth, normal cellular glucose, fat metabolism and prolonged longevity.

Immunogen: Synthetic peptide within human GLUT1 aa 15-60/492.

Positive control: Human placenta tissue lysates, Hela, human liver tissue, human breast tissue, mouse liver tissue.

Subcellular location: Cell membrane, Melanosome.

Database links: SwissProt: P11166 Human | P17809 Mouse

Recommended Dilutions:

WB	1:500
IF-Cell	1:100-1:500
IHC-P	1:50-1:200
FC	1:50-1:100

Storage Buffer: 1*PBS (pH7.4), 0.2% BSA, 50% Glycerol. Preservative: 0.05% Sodium Azide.

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: Immunogen affinity purified.

Hangzhou Huaan Biotechnology Co., Ltd.

Orders:0086-571-88062880

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Applications:WB=Western blot IHC-P=Immunohistochemistry (paraffin) IF-Cell=Immunofluorescence (Cell) IF-Tissue=Immunofluorescence (Tissue) FC=Flow cytometry IP=Immunoprecipitation

Images

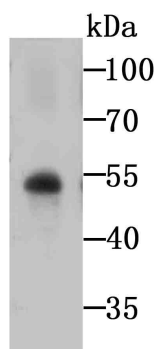


Fig1: Western blot analysis of Glut1 on human placenta tissue lysates using anti-Glut1 antibody at 1/1,000 dilution.

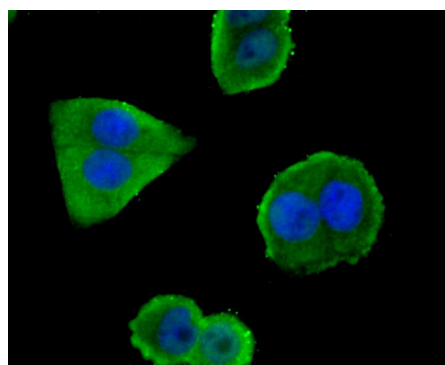


Fig2: ICC staining Glut1 in HeLa cells (green). The nuclear counter stain is DAPI (blue). Cells were fixed in paraformaldehyde, permeabilised with 0.25% Triton X100/PBS.

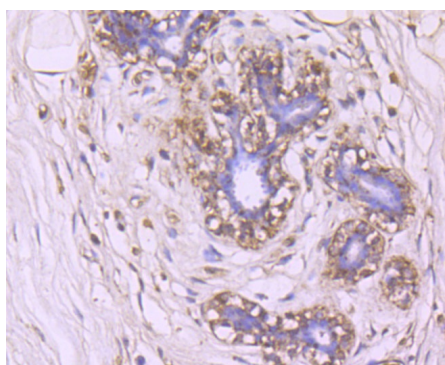


Fig3: Immunohistochemical analysis of paraffin-embedded human breast tissue using anti-Glut1 antibody. Counter stained with hematoxylin.

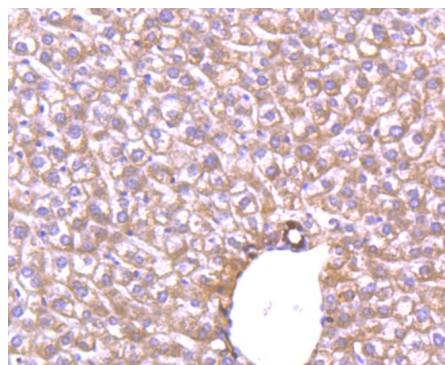


Fig4: Immunohistochemical analysis of paraffin-embedded mouse liver tissue using anti-Glut1 antibody. Counter stained with hematoxylin.

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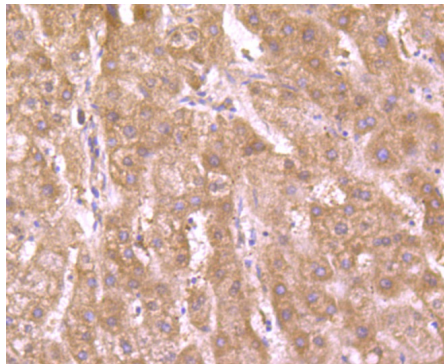


Fig5: Immunohistochemical analysis of paraffin-embedded human liver tissue using anti-Glut1 antibody. Counter stained with hematoxylin.

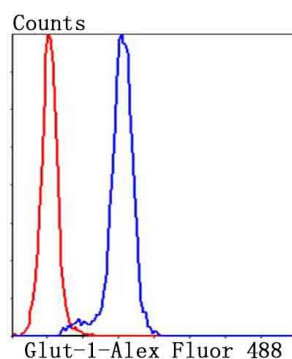


Fig6: Flow cytometric analysis of HeLa cells with Glut1 antibody at 1/100 dilution (blue) compared with an unlabelled control (cells without incubation with primary antibody; red). Alexa Fluor 488-conjugated goat anti-rabbit IgG was used as the secondary antibody.

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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