

Anti-Glucose Transporter GLUT4 Antibody

R1402-3



Product Type:	Rabbit polyclonal IgG, primary antibodies
Species reactivity:	Human, Mouse, Rat
Applications:	WB, IF-Cell, IF-Tissue, IHC-P
Molecular Wt:	Predicted band size: 55 kDa

Description: Glucose transporter type 4 (GLUT4), also known as solute carrier family 2, facilitated glucose transporter member 4, is a protein encoded, in humans, by the SLC2A4 gene. GLUT4 is the insulin-regulated glucose transporter found primarily in adipose tissues and striated muscle (skeletal and cardiac). The first evidence for this distinct glucose transport protein was provided by David James in 1988. The gene that encodes GLUT4 was cloned and mapped in 1989. At the cell surface, GLUT4 permits the facilitated diffusion of circulating glucose down its concentration gradient into muscle and fat cells. Once within cells, glucose is rapidly phosphorylated by glucokinase in the liver and hexokinase in other tissues to form glucose-6-phosphate, which then enters glycolysis or is polymerized into glycogen. Glucose-6-phosphate cannot diffuse back out of cells, which also serves to maintain the concentration gradient for glucose to passively enter cells.

Immunogen:	Synthetic peptide within Human Glucose Transporter GLUT4 aa 460-509 / 509.
Positive control:	Mouse heart tissue lysate, Mouse skeletal muscle tissue lysate, Rat skeletal muscle tissue lysate, mouse heart tissue.
Subcellular location:	Cell membrane, Endomembrane system, Cytoplasm, perinuclear region.
Database links:	SwissProt: P14672 Human P14142 Mouse P19357 Rat
Recommended Dilutions:	
WB	1:1,000-1:5,000
IF-Cell	1:50-1:200
IF-Tissue	1:50-1:200
IHC-P	1:50-1:200
Storage Buffer:	1*PBS (pH7.4), 0.2% BSA, 40% 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.

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Images

Fig1: Western blot analysis of Glucose Transporter GLUT4 on different lysates with Rabbit anti-Glucose Transporter GLUT4 antibody (R1402-3) at 1/2,000 dilution.

Lane 1: Mouse heart tissue lysate (no heat)
 Lane 2: Mouse skeletal muscle tissue lysate (no heat)
 Lane 3: Rat skeletal muscle tissue lysate (no heat)
 Lane 4: Rat kidney tissue lysate (low expression) (no heat)

Notice: no heat means the lysate is not boiled.

Lysates/proteins at 20 µg/Lane.

Predicted band size: 55 kDa

Observed band size: 50 kDa

Exposure time: 1 minute; 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 (R1402-3) at 1/2,000 dilution was used in 5% NFDM/TBST at 4°C overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/50,000 dilution was used for 1 hour at room temperature.

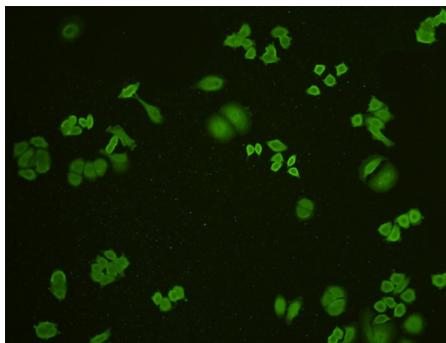
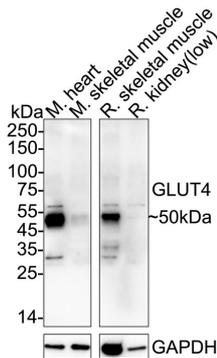


Fig2: ICC staining GLUT4 in MCF-7 cells (green). Cells were fixed in paraformaldehyde, permeabilised with 0.25% Triton X100/PBS.

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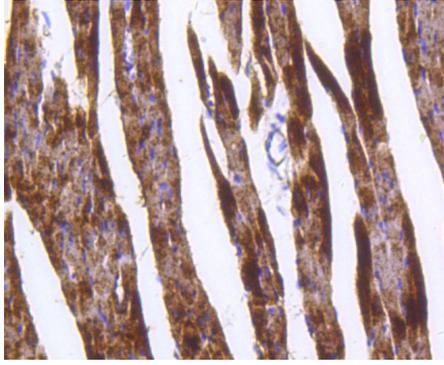


Fig3: Immunohistochemical analysis of paraffin-embedded mouse heart tissue using anti-GLUT4 antibody. Counter stained with hematoxylin.

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

Background References

1. Lu H et al. Transient hypoxia reprograms differentiating adipocytes for enhanced insulin sensitivity and triglyceride accumulation. *Int J Obes (Lond)* 40:121-8 (2016).
2. Zhou Y et al. MicroRNA-29a induces insulin resistance by targeting PPAR δ in skeletal muscle cells. *Int J Mol Med* 37:931-8 (2016).

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