



Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Mouse, Rat
Applications:	WB, IHC-Fr
Molecular Wt:	Predicted band size: 55 kDa
Clone number:	PSH10-06

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). 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 GLUT4 aa 447-509.

Positive control: Mouse heart tissue, rat skeletal muscle tissue, Mouse heart tissue lysate, Mouse skeletal muscle tissue lysate, Rat skeletal muscle tissue lysate.

Subcellular location: Cell membrane, Endomembrane system, Cytoplasm, perinuclear region.

Database links: SwissProt: P14142 Mouse | P19357 Rat

Recommended Dilutions:

WB	1:5,000
IHC-Fr	1:500

Storage Buffer: 1*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

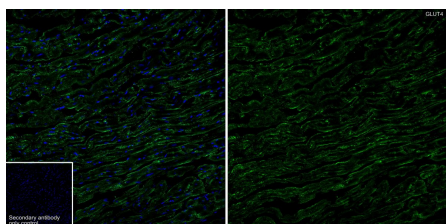


Fig1: Immunofluorescence analysis of frozen mouse heart tissue with Rabbit anti-Glucose Transporter GLUT4 antibody (HA751336) at 1/500 dilution.

The section was not undergone antigen retrieval. The tissues were blocked in 10% negative goat serum for 1 hour at room temperature, washed with PBS, and then probed with the primary antibody (HA751336, green) at 1/500 dilution overnight at 4 °C, washed with PBS. Goat Anti-Rabbit IgG H&L (iFluor™ 488, HA1121) was used as the secondary antibody at 1/1,000 dilution. Nuclei were counterstained with DAPI (blue).

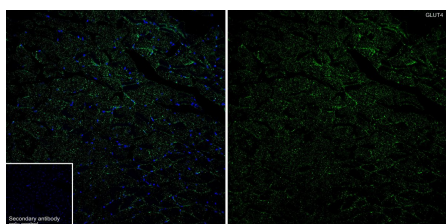
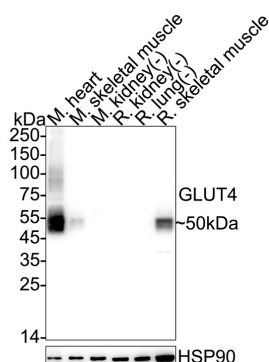


Fig2: Immunofluorescence analysis of frozen rat skeletal muscle tissue with Rabbit anti-Glucose Transporter GLUT4 antibody (HA751336) at 1/500 dilution.

The section was not undergone antigen retrieval. The tissues were blocked in 10% negative goat serum for 1 hour at room temperature, washed with PBS, and then probed with the primary antibody (HA751336, green) at 1/500 dilution overnight at 4 °C, washed with PBS. Goat Anti-Rabbit IgG H&L (iFluor™ 488, HA1121) was used as the secondary antibody at 1/1,000 dilution. Nuclei were counterstained with DAPI (blue).

Fig3: Western blot analysis of Glucose Transporter GLUT4 on different lysates with Rabbit anti-Glucose Transporter GLUT4 antibody (HA751336) at 1/5,000 dilution.



Lane 1: Mouse heart tissue lysate (no heat) (30 µg/Lane)

Lane 2: Mouse skeletal muscle tissue lysate (no heat) (30 µg/Lane)

Lane 3: Mouse kidney tissue lysate (no heat) (negative) (30 µg/Lane)

Lane 4: Rat kidney tissue lysate (negative) (30 µg/Lane)

Lane 5: Rat lung tissue lysate (no heat) (negative) (30 µg/Lane)

Lane 6: Rat skeletal muscle tissue lysate (no heat) (30 µg/Lane)

Notice: no heat means the lysate is not boiled.

Predicted band size: 55 kDa

Observed band size: 50 kDa

Exposure time: 20 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 (HA751336) at 1/5,000 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.

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

Background References

1. van Gerwen J et al. Insulin signalling and GLUT4 trafficking in insulin resistance. Biochem Soc Trans. 2023 Jun
2. Yuan Y et al. Cryo-EM structure of human glucose transporter GLUT4. Nat Commun. 2022 May

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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