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Anti-GLUT4 Antibody
Catalog # ABO11032

Specification

Anti-GLUT4 Antibody - Product Information

Application	**WB, IHC-P**
Primary Accession	P14672
Host	**Rabbit**
Reactivity	**Human, Mouse, Rat**
Clonality	**Polyclonal**
Format	**Lyophilized**

Description
Rabbit IgG polyclonal antibody for Solute carrier family 2, facilitated glucose transporter member 4(SLC2A4) detection. Tested with WB, IHC-P in Human;Mouse;Rat.

Reconstitution
Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Anti-GLUT4 Antibody - Additional Information

Gene ID 6517

Other Names
Solute carrier family 2, facilitated glucose transporter member 4, Glucose transporter type 4, insulin-responsive, GLUT-4, SLC2A4, GLUT4

Calculated MW
54787 MW KDa

Application Details
Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml, Human, Rat, Mouse, By Heat

Western blot, 0.1-0.5 µg/ml, Human, Mouse, Rat

Subcellular Localization
Cell membrane ; Multi-pass membrane protein . Endomembrane system ; Multi-pass membrane protein . Cytoplasm, perinuclear region . Localizes primarily to the perinuclear region, undergoing continued recycling to the plasma membrane where it is rapidly reinternalized. The dileucine internalization motif is critical for intracellular sequestration.

Tissue Specificity
Skeletal and cardiac muscles; brown and white fat.

Protein Name
Solute carrier family 2, facilitated glucose transporter member 4

Contents
Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg Thimerosal, 0.05mg NaN3.

Immunogen

A synthetic peptide corresponding to a sequence at the C-terminus of human GLUT4 (491-509aa EQEVKPSTELEYLGPDEND), identical to the related rat and mouse sequences.

Purification
Immunogen affinity purified.

Cross Reactivity
No cross reactivity with other proteins

Storage	**At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated freezing and thawing.**

Sequence Similarities
Belongs to the major facilitator superfamily. Sugar transporter (TC 2.A.1.1) family. Glucose transporter subfamily.

Anti-GLUT4 Antibody - Protein Information

Name SLC2A4 (HGNC:11009)

Function
Insulin-regulated facilitative glucose transporter, which plays a key role in removal of glucose from circulation. Response to insulin is regulated by its intracellular localization: in the absence of insulin, it is efficiently retained intracellularly within storage compartments in muscle and fat cells. Upon insulin stimulation, translocates from these compartments to the cell surface where it transports glucose from the extracellular milieu into the cell.

Cellular Location
Cell membrane {ECO:0000250|UniProtKB:P14142}; Multi-pass membrane protein {ECO:0000250|UniProtKB:P14142} Endomembrane system; Multi-pass membrane protein. Cytoplasm, perinuclear region {ECO:0000250|UniProtKB:P14142}. Note=Localizes primarily to the perinuclear region, undergoing continued recycling to the plasma membrane where it is rapidly reinternalized (PubMed:8300557). The dileucine internalization motif is critical for intracellular sequestration (PubMed:8300557). Insulin stimulation induces translocation to the cell membrane (By similarity) {ECO:0000250|UniProtKB:P14142, ECO:0000269|PubMed:8300557}

Tissue Location
Skeletal and cardiac muscles; brown and white fat.

Anti-GLUT4 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

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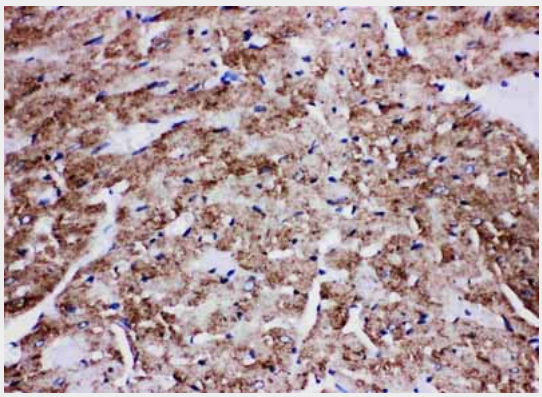
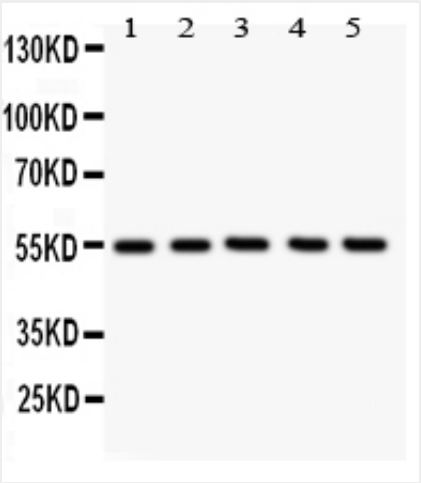
Anti-GLUT4 Antibody - Images



Anti-GLUT4 antibody, ABO11032, IHC(P)IHC(P): Rat Cardiac Muscle Tissue



Anti-GLUT4 antibody, ABO11032, Western blottingAll lanes: Anti GLUT4 (ABO11032) at 0.5ug/mlLane 1: Rat Cardiac Muscle Tissue Lysate at 50ugLane 2: Rat Skeletal Muscle Tissue Lysate at 50ugLane 3: Mouse Cardiac Muscle Tissue Lysate at 50ugLane 4: Mouse Skeletal Muscle Tissue Lysate at 50ugLane 5: HELA Whole Cell Lysate at 40ugPredicted bind size: 55 KDObserved bind size: 55 KD

Anti-GLUT4 Antibody - Background

Facilitated glucose transport by mammalian cells is not a property of a single protein but an activity associated with a family of structurally related proteins. Glucose transporter 4 is a insulin-responsive glucose transporter. It belongs to solute carrier family 2, member 1. Insulin alters the subcellular localization of GLUT4 vesicles in human muscle, and that this effect is impaired equally in insulin-resistant subjects with and without diabetes. A similar pattern of defects cause insulin resistance in human adipocytes.Human insulin resistance involves a defect in GLUT4 traffic and targeting leading to accumulation in a dense membrane compartment from which insulin is unable to recruit GLUT4 to the cell surface.