OriGene Technologies, Inc.
9620 Medical Center Drive, Ste 200
Rockville, MD 20850, US
Phone: +1-888-267-4436
https://www.origene.com
techsupport@origene.com
EU: info-de@origene.com
CN: techsupport@origene.cn

Product datasheet for TA336786

GLUT4 (SLC2A4) Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	FC, ICC/IF, IHC, WB
Recommended Dilution:	Flow (Intracellular), Immunohistochemistry: 1:200, Immunocytochemistry/ Immunofluorescence: 1:100, Western Blot: 0.5ug/ml, Immunohistochemistry-Paraffin, Flow Cytometry
Reactivity:	Human, Mouse
Host:	Rabbit
Clonality:	Polyclonal
Immunogen:	A synthetic peptide made to a C-terminal portion of the human Glucose Transporter GLUT4 protein (between residues 480-509) [UniProt P14672]
Formulation:	PBS, 30% glycerol, 0.1% Sodium Azide. Aliquot and store at -20C or -80C. Avoid freeze-thaw cycles.
Concentration:	lot specific
Purification:	Immunogen affinity purified
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Gene Name:	solute carrier family 2 member 4
Database Link:	NP_001033 Entrez Gene 20528 MouseEntrez Gene 6517 Human P14672

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Background: Glucose Transporter GLUT4 (SLC2A4 or GLUT4) is an insulin-sensitive glucose transporter which facilitate insulin-stimulated glucose uptake in adipose tissue, skeletal muscle and cardiac tissues (that specifically express GLUT4). GLUT4 is a 12-transmembrane domain/ multi-pass membrane protein localized in endomembrane system as well as cytoplasm near perinuclear region, and facilitates glucose transport in the direction of glucose gradient. This transporter localizes to intracellular organelles (endosomes) in unstimulated cells and translocates to the cell surface following insulin stimulation via TBC1D4 phosphorylation. Transgenic mice lacking or overexpressing GLUT4 respectively decrease or increase whole-body insulin sensitivity, suggesting its role in maintenance of glucose homeostasis, and accordingly, under obesity conditions, reduction of GLUT4 gene expression is directly related to insulin resistance development. Inflammatory cytokines produced by the adipose tissue including TNF-alpha, IL-6 etc have been related to reduce GLUT4 expression and defective GLUT4 is an underlying cause of NIDDM.

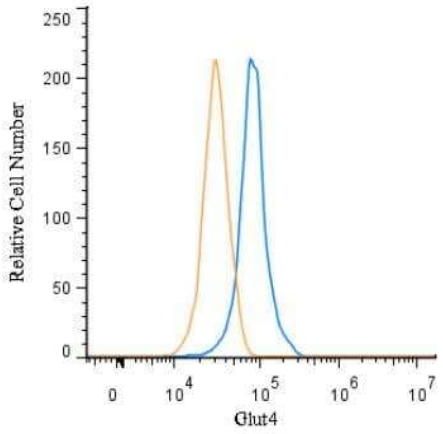
Synonyms: GLUT4

Note: This GLUT4 antibody is useful for Western blot, IHC and ICC/IF. Use in Immunohistochemistry-Paraffin reported in scientific literature (PMID 24339864). Flow cytometry data from customer review.

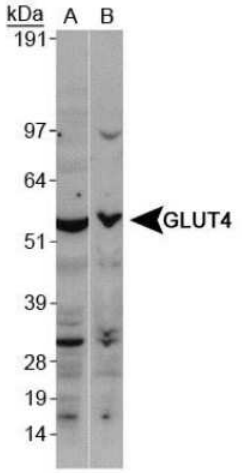
Protein Families: Druggable Genome, Transmembrane

Protein Pathways: Adipocytokine signaling pathway, Insulin signaling pathway, Type II diabetes mellitus

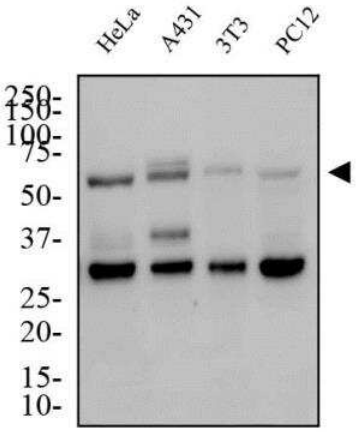
Product images:



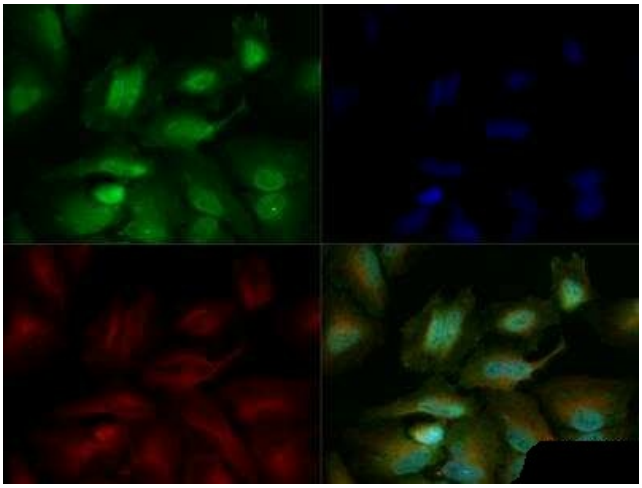
Flow (Intracellular): Glut4 Antibody TA336786 - An intracellular stain was performed on HepG2 with TA336786 and a matched isotype control. Cells were fixed with 4% PFA and then permeablized with 0.1% saponin. Cells were incubated in an antibody dilution of 5 ug/mL for 30 minutes at room temperature, followed by Rabbit IgG (H+L) Cross-Adsorbed Secondary Antibody.



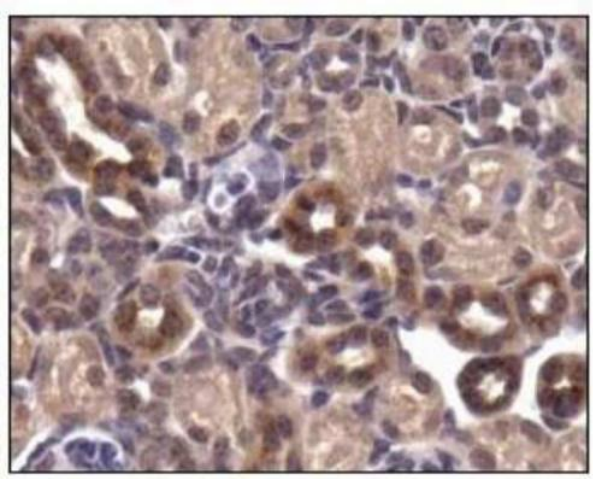
Western Blot: Glut4 Antibody TA336786 - Analysis of GLUT4 in A) MCF7 whole cell lysate and B) 3T3L1 whole cell lysate.



Western Blot: Glut4 Antibody TA336786 - Total protein from Human HeLa and A431, Mouse 3T3 and Rat PC12 cells was separated on a 12% gel by SDS-PAGE, transferred to PVDF membrane and blocked in 5% non-fat milk in TBST. The membrane was probed with 2.0 ug/ml anti-Glut4 in 1% non-fat milk in TBST and detected with an anti-rabbit HRP secondary antibody using chemiluminescence.



Immunocytochemistry/Immunofluorescence: Glut4 Antibody TA336786 - HeLa cells were fixed for 10 minutes using 10% formalin and then permeabilized for 5 minutes using 1X TBS + 0.5% Triton X-100. The cells were incubated with anti-GLUT4 TA336786 at a 1:200 dilution overnight at 4C and detected with an anti-rabbit DyLight 488 (Green) at a 1:500 dilution. Alpha tubulin (DM1A) NB100-690 was used as a co-stain at a 1:1000 dilution and detected with an anti-mouse DyLight 550 (Red) at a 1:500 dilution. Nuclei were counterstained with DAPI (Blue). Cells were imaged using a 40X objective.



Immunohistochemistry: Glut4 Antibody
TA336786 - Analysis of GLUT4 in mouse kidney