

# Glut4 (1F8) Mouse mAb

✓ 100 µl  
(10 western blots)

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This product is intended for research purposes only. This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals.

Entrez-Gene ID #6517  
Swiss-Prot Acc. #P14672

| Applications<br>W<br>Endogenous | Species Cross-Reactivity*<br>H, M, R | Molecular Wt.<br>50 kDa | Isotype<br>Mouse IgG1** |
|---------------------------------|--------------------------------------|-------------------------|-------------------------|
|---------------------------------|--------------------------------------|-------------------------|-------------------------|

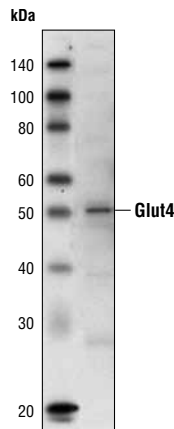
**Background:** A group of related glucose transporters (Glut1-5 and 7) mediate the facilitated diffusion of glucose in nonepithelial mammalian tissues. Within insulin-responsive tissues such as muscle and fat, Glut1 contributes to basal glucose uptake while Glut4 is responsible for insulin-stimulated glucose transport (1-3). Glut4 is a 12-transmembrane domain protein that facilitates glucose transport in the direction of the glucose gradient. This transporter localizes to intracellular organelles (endosomes) in unstimulated cells and translocates to the cell surface following insulin stimulation (1,2,4). Translocation of Glut4 is dependent on Akt, which may act by phosphorylating AS160, a RabGAP protein involved in membrane trafficking (5).

**Specificity/Sensitivity:** Glut4 (1F8) Mouse mAb detects endogenous levels of total Glut4 protein. It does not cross-react with other related proteins.

**Source/Purification:** Monoclonal antibodies are produced by immunizing animals with partially purified intracellular glucose transporter-containing vesicles obtained from rat adipocytes.

**Background References:**

- (1) Marette, A. et al. (1992) *Am. J. Physiol.* 263, C443-C452.
- (2) Slot, J.W. et al. (1991) *Proc. Natl. Acad. Sci. USA* 88, 7815-7819.
- (3) James, D.E. et al. (1989) *Nature* 338, 83-87.
- (4) Barrett, M.P. et al. (1999) *Curr. Opin. Cell Biol.* 11, 496-502.
- (5) Zeigerer, A. et al. (2004) *Mol. Biol. Cell* 15, 4406-4415.



Western blot analysis of extracts from NIH/3T3 cells using Glut4 (1F8) Mouse mAb.

**Storage:** Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

\*Species cross-reactivity is determined by western blot.

\*\*Anti-mouse secondary antibodies must be used to detect this antibody.

**Recommended Antibody Dilutions:**

Western blotting 1:1000

For application specific protocols please see the web page for this product at [www.cellsignal.com](http://www.cellsignal.com).

Please visit [www.cellsignal.com](http://www.cellsignal.com) for a complete listing of recommended companion products.

**IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v nonfat dry milk, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.**

**Applications Key:** W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide  
**Species Cross-Reactivity Key:** H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine  
Dg—dog Pg—pig Sc—S. cerevisiae Ce—C. elegans Hr—horse All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.