Glut4 (IF8): sc-53566

**BACKGROUND**

Glucose is fundamental to the metabolism of mammalian cells. Its passage across cell membranes is mediated by a family of transporters termed glucose transporters or Gluts. In adipose and muscle tissue, insulin stimulates a rapid and dramatic increase in glucose uptake, which is largely due to the redistribution of the insulin-inducible glucose transporter, Glut4. In response to insulin, Glut4 is quickly shuttled from an intracellular storage site to the plasma membrane, where it binds glucose. In contrast, the ubiquitously expressed glucose transporter Glut1 is constitutively targeted to the plasma membrane, and shows a much less dramatic translocation in response to insulin. Glut1 and Glut4 are 12-pass transmembrane proteins (12TM) whose carboxy-termini may dictate their cellular localization. Absent Glut4 expression has been suggested to contribute to such maladies as obesity and diabetes. Glut4 null mice have shown that while functional Glut4 protein is not required for maintaining normal glucose levels, it is necessary for sustained growth, normal cellular glucose, fat metabolism and prolonged longevity.

**CHROMOSOMAL LOCATION**

Genetic locus: SLC2A4 (human) mapping to 17p13.1; Slc2a4 (mouse) mapping to 10K8

**SOURCE**

Glut4 (IF8) is a mouse monoclonal antibody raised against partially purified vesicles containing Glut4 derived from rat adipocytes.

**PRODUCT**

Each vial contains 200 µg IgGk kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Glut4 (IF8) is available conjugated to agarose (sc-53566 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-53566 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-53566 PE), fluorescent (sc-53566 FITC), Alexa Fluor® 488 (sc-53566 AF488), Alexa Fluor® 546 (sc-53566 AF546), Alexa Fluor® 594 (sc-53566 AF594) or Alexa Fluor® 647 (sc-53566 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-53566 AF680) or Alexa Fluor® 790 (sc-53566 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

**APPLICATIONS**

Glut4 (IF8) is recommended for detection of Glut4 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraaffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).


Molecular Weight of Glut4: 50-66 kDa.

**STORAGE**

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

**DATA**

![Glut4 (IF8): sc-53566. Western blot analysis of Glut4 expression in mouse skeletal muscle (A), mouse heart (B) and mouse tongue (C) tissue extracts.](image)

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**REFERENCES**

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**RESEARCH USE**

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