

DESCRIPTION

Species Reactivity	Rat
Specificity	Recognizes an epitope in the cytoplasmic portion of rat Glut4 and has been shown to bind only to the muscle-adipose isoform of the glucose transporter, which is antigenically unique from the other transport proteins (1-3). Recognizes Glut4 in human, monkey, rat, mouse, and rabbit systems. It does not recognize this protein in canine systems. Its ability to bind to glucose transporter from other species has not been tested.
Source	Monoclonal Mouse IgG ₁ Clone # 1F8
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Partially purified vesicles containing Glut4
Formulation	Supplied as a 0.2 µm filtered solution in PBS. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

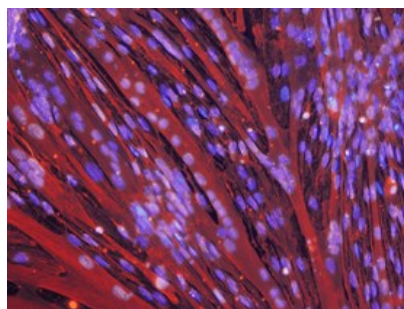
APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the Technical Information section on our website.

	Recommended Concentration	Sample
Immunocytochemistry	8-25 µg/mL	See Below
Immunohistochemistry	5-25 µg/mL	See Below
Western Blot	Zorzano, <i>et al.</i> (1989) J. Biol. Chem. 264 :12358.	
Immunoaffinity Purification	Membrane vesicles from fat and muscle were immunoabsorbed using this antibody linked to sepharose (3, 4).	
Immunoprecipitation	Fischer, <i>et al.</i> (1997) J. Biol. Chem. 272 :7085.	

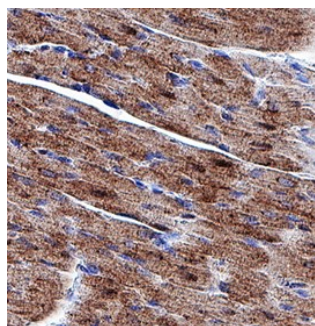
DATA

Immunocytochemistry



Glut4 in L6 Rat Cell Line. Glut4 was detected in immersion fixed L6 rat myoblast cell line (differentiated to muscle) using 10 µg/mL Rat Glut4 Monoclonal Antibody (Catalog # MAB1262) for 3 hours at room temperature. Cells were stained with the NorthernLights™ 557-conjugated Anti-Mouse IgG Secondary Antibody (red; Catalog # NL007) and counterstained with DAPI (blue). View our protocol for [Fluorescent ICC Staining of Cells on Coverslips](#).

Immunohistochemistry



Glut4 in Rat Heart Tissue. Glut4 was detected in immersion fixed paraffin-embedded sections of rat heart tissue using Mouse Anti-Rat Glut4 Monoclonal Antibody (Catalog # MAB1262) at 5 µg/mL overnight at 4 °C. Before incubation with the primary antibody, tissue was subjected to heat-induced epitope retrieval using Antigen Retrieval Reagent-Basic (Catalog # CTS013). Tissue was stained using the Anti-Mouse IgG VisUCyte™ HRP Polymer Antibody (brown; Catalog # VC001) and counterstained with hematoxylin (blue). Specific staining was localized to cytoplasm in cardiomyocytes. View our protocol for [IHC Staining with VisUCyte HRP Polymer Detection Reagents](#).

PREPARATION AND STORAGE

Shipping	The product is shipped with dry ice or equivalent. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> 12 months from date of receipt, -20 to -70 °C, as supplied. 1 month, 2 to 8 °C under sterile conditions after opening. 6 months, -20 to -70 °C under sterile conditions after opening.

BACKGROUND

Glut4 belongs to the facilitative glucose transporter protein family that comprises 13 members. It is an integral membrane protein with 12 transmembrane domains. Glut4 is expressed in the insulin-responsive tissues, muscle and adipose tissue. Insulin stimulation leads to translocation of Glut4 from intracellular stores to the cell surface resulting in the enhancement of glucose uptake.

References:

- James, *et al.* (1988) Nature **333**:183.
- Fukumoto, *et al.* (1989) J. Biol. Chem. **264**:7776.
- Zorzano, *et al.* (1989) J. Biol. Chem. **264**:12358.
- Rodnick, *et al.* (1992) J. Biol. Chem. **267**:6278.