GLUT4 (SLC2A4) tetramer transports Glc from extracellular region to cytosol

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Introduction

Reactome is open-source, open access, manually curated and peer-reviewed pathway database. Pathway annotations are authored by expert biologists, in collaboration with Reactome editorial staff and cross-referenced to many bioinformatics databases. A system of evidence tracking ensures that all assertions are backed up by the primary literature. Reactome is used by clinicians, geneticists, genomics researchers, and molecular biologists to interpret the results of high-throughput experimental studies, by bioinformaticians seeking to develop novel algorithms for mining knowledge from genomic studies, and by systems biologists building predictive models of normal and disease variant pathways.

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Literature references

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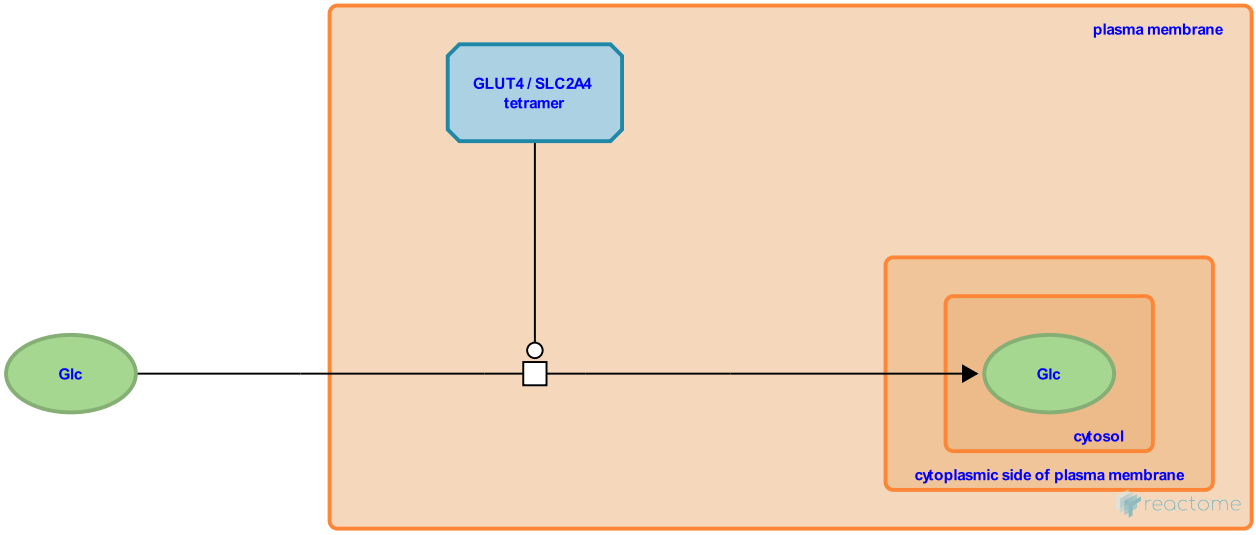
Stable identifier: R-HSA-8981570

Type: transition

Compartments: cytosol, plasma membrane, extracellular region



Tetrameric GLUT4, the SLC2A4 gene product, associated with the plasma membrane, mediates the facilitated diffusion of glucose (Glc) into cells. GLUT4 is found in heart, skeletal muscle, brain and adipose tissue. GLUT4 molecules are translocated from an intracellular store to the cell surface in response to increased insulin levels, increasing glucose transport 10-20-fold (Bryant et al. 2002; Fukumoto et al. 1989). Defects in SLC2A4 may be a cause of non-insulin-dependent diabetes mellitus (NIDDM) (Kusari et al. 1991; Choi et al. 1991).

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Editions

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