

# Co-transport (influx) of glucose/mannose and Na<sup>+</sup> ions by SGLT4

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04/10/2024

## 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.

The development of Reactome is supported by grants from the US National Institutes of Health (P41 HG003751), University of Toronto (CFREF Medicine by Design), European Union (EU STRP, EMI-CD), and the European Molecular Biology Laboratory (EBI Industry program).

## Literature references

Fabregat, A., Sidiropoulos, K., Viteri, G., Forner, O., Marin-Garcia, P., Arnau, V. et al. (2017). Reactome pathway analysis: a high-performance in-memory approach. *BMC bioinformatics*, 18, 142. [↗](#)

Sidiropoulos, K., Viteri, G., Sevilla, C., Jupe, S., Webber, M., Orlic-Milacic, M. et al. (2017). Reactome enhanced pathway visualization. *Bioinformatics*, 33, 3461-3467. [↗](#)

Fabregat, A., Jupe, S., Matthews, L., Sidiropoulos, K., Gillespie, M., Garapati, P. et al. (2018). The Reactome Pathway Knowledgebase. *Nucleic Acids Res*, 46, D649-D655. [↗](#)

Fabregat, A., Korninger, F., Viteri, G., Sidiropoulos, K., Marin-Garcia, P., Ping, P. et al. (2018). Reactome graph database: Efficient access to complex pathway data. *PLoS computational biology*, 14, e1005968. [↗](#)

Reactome database release: 90

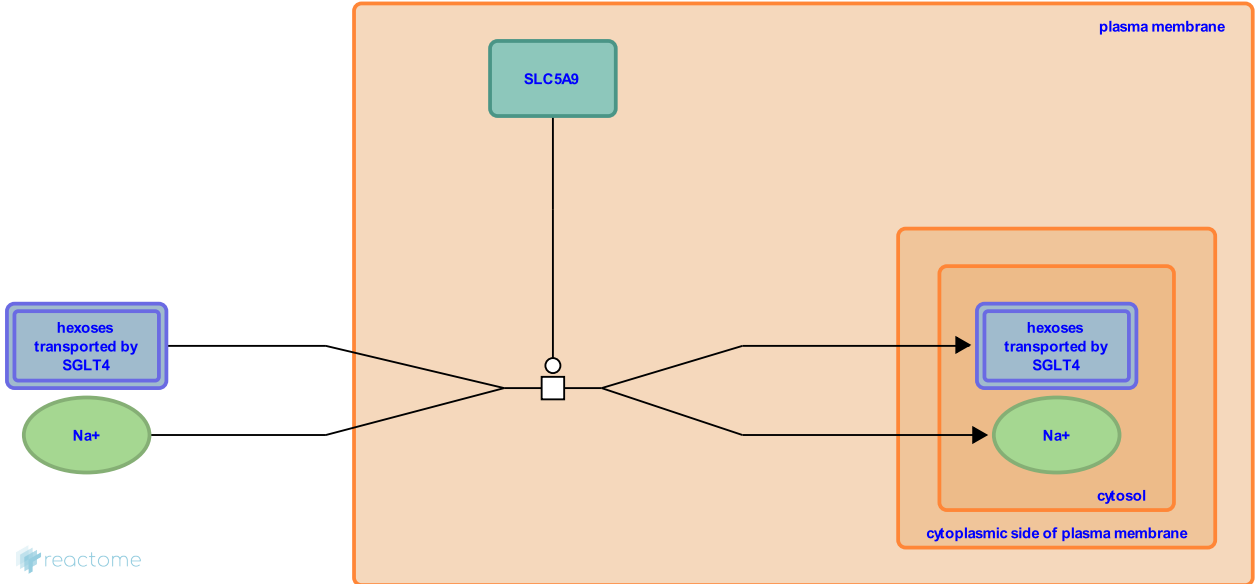
This document contains 1 reaction ([see Table of Contents](#))

**Co-transport (influx) of glucose/mannose and Na<sup>+</sup> ions by SGLT4** ↗

**Stable identifier:** R-HSA-429567

**Type:** transition

**Compartments:** plasma membrane



The human gene SLC5A9 encodes a low affinity transporter for glucose and mannose (SGLT4). Of the tissues tested, SGLT4 appears to be highly expressed in the kidney and intestine, with lower levels detected in the liver. Human SGLT4 expressed in african green monkey cells exhibited glucose and mannose co-transport with Na<sup>+</sup> ions (Tazawa S et al, 2005).

**Literature references**

Sugiyama, T., Takemura, Y., Maruyama, H., Isogai, T., Yamato, T., Tazawa, S. et al. (2005). SLC5A9/SGLT4, a new Na<sup>+</sup>-dependent glucose transporter, is an essential transporter for mannose, 1,5-anhydro-D-glucitol, and fructose. *Life Sci*, 76, 1039-50. ↗

**Editions**

2009-07-17	Authored, Edited	Jassal, B.
2009-08-24	Reviewed	He, L.