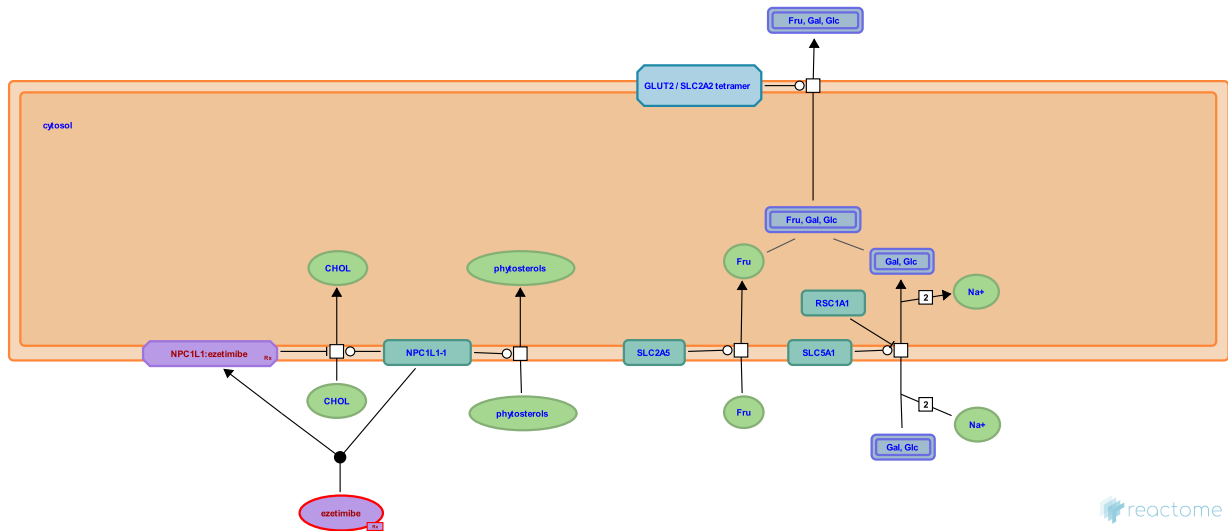


Intestinal absorption



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This is just an excerpt of a full-length report for this pathway. To access the complete report, please download it at the [Reactome Textbook](https://reactome.org/textbook/).

24/04/2024

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.

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Literature references

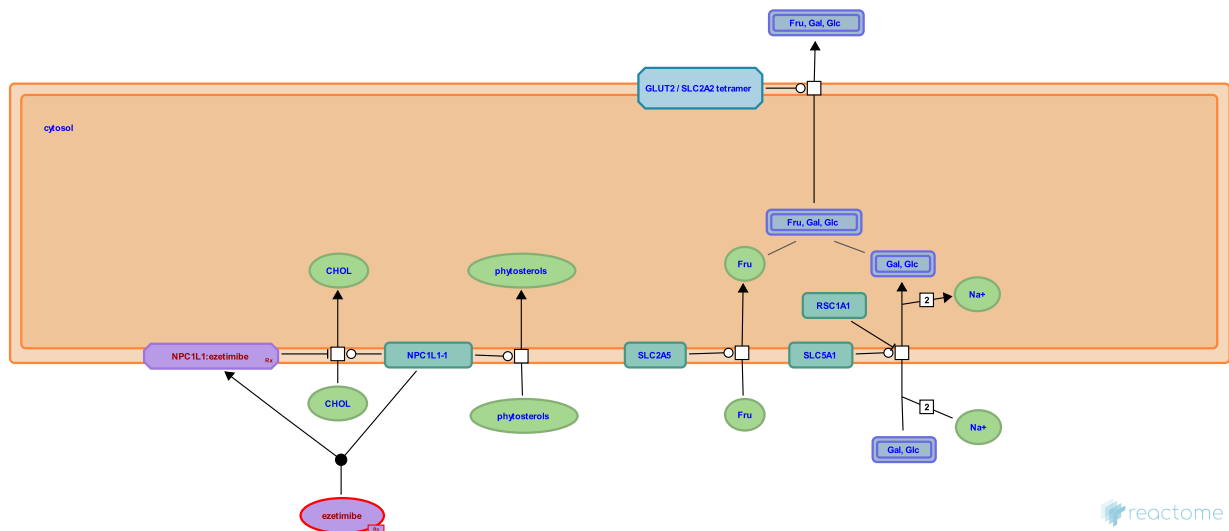
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Reactome database release: 88

This document contains 3 pathways ([see Table of Contents](#))

Intestinal absorption ↗

Stable identifier: R-HSA-8963676



Nutrient absorption occurs mostly in the small intestine. Processes annotated here include the uptake of dietary cholesterol and phytosterols, and of monosaccharides. Movement of the final products of digestion out of the intestinal lumen is mediated by arrays of transporters associated with the apical and basolateral surfaces of enterocytes (Yamada 2015).

Literature references

Yamada, T. (2015). Yamada's Textbook of Gastroenterology. *Wiley-Blackwell*, 3440.

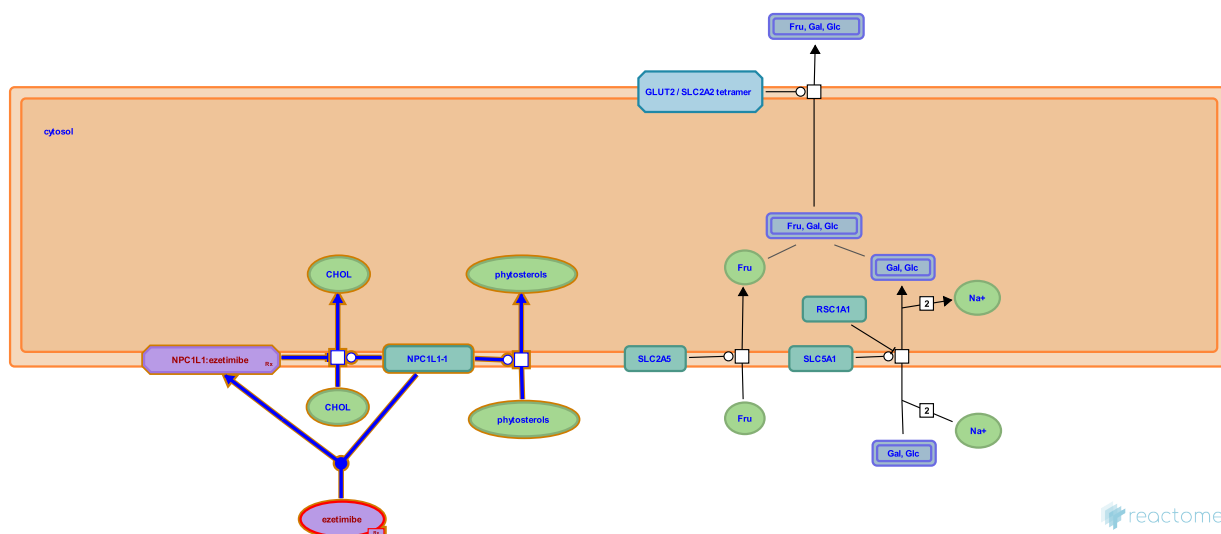
Editions

2008-05-12	Authored	D'Eustachio, P.
2008-06-13	Reviewed	Jassal, B.
2017-02-10	Edited	D'Eustachio, P.

Intestinal lipid absorption ↗

Location: Intestinal absorption

Stable identifier: R-HSA-8963678



Niemann-Pick C1 Like 1 (NPC1L1) protein in enterocytes is critical for intestinal cholesterol and phytosterol absorption, and is the target of the drug ezetimibe (Davis et al. 2004).

Literature references

Iyer, SP., Altmann, SW., Detmers, PA., Lam, MH., Maguire, M., Yao, X. et al. (2004). Niemann-Pick C1 Like 1 (NPC1L1) is the intestinal phytosterol and cholesterol transporter and a key modulator of whole-body cholesterol homeostasis. *J. Biol. Chem.*, 279, 33586-92. ↗

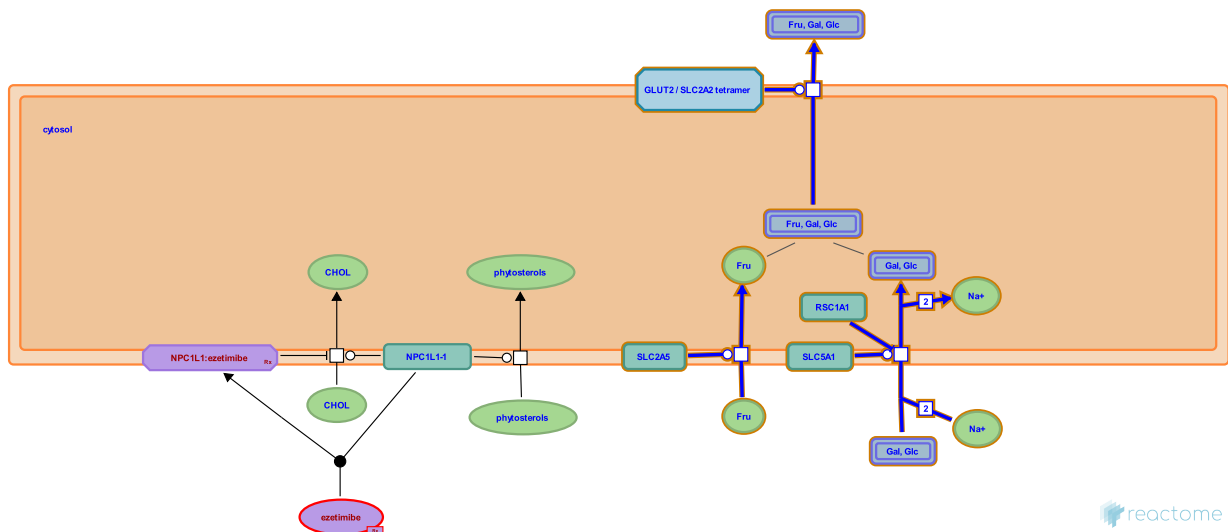
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Intestinal hexose absorption ↗

Location: [Intestinal absorption](#)

Stable identifier: R-HSA-8981373



Hexoses, notably fructose, glucose, and galactose generated in the lumen of the small intestine by breakdown of dietary carbohydrate, are taken up by enterocytes lining the microvilli of the small intestine and released from them into the blood. Uptake into enterocytes is mediated by two transporters localized on the luminal surfaces of the cells. SLC5A1, also known as SGLT1, mediates the co-transport of sodium ions and glucose and galactose, and SLC2A5, also known as GLUT5, mediates fructose uptake (Wright 1998). Tetrameric SLC2A2, also known as GLUT2, localized on the basolateral surfaces of enterocytes, mediates the release of these hexoses into the blood (Kellett & Brot-Laroche 2005; Wright et al. 2004).

Literature references

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Editions

2006-11-03	Authored, Edited	D'Eustachio, P.
2007-01-16	Reviewed	Wright, EM.

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