FUT2 transfers Fuc to LeA to form LeB

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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


Reactome database release: 78

This document contains 1 reaction (see Table of Contents)
FUT2 transfers Fuc to LeA to form LeB

**Stable identifier:** R-HSA-9603982

**Type:** transition

**Compartments:** Golgi lumen, Golgi membrane

The *FUT2* gene (originally named the *Se* gene) expresses galactoside 2-alpha-L-fucosyltransferase 2 present on the Golgi membrane. FUT2 catalyses the α1,2 addition of fucose (Fuc) to Type 1 and Type 2 oligosaccharide chains, thereby playing a role in Lewis blood group determination (Kukowska-Latallo et al. 1990). Here, the addition of fucose to the terminal galactose (Gal) of the Lewis A antigen (LeA) in an α1,2 linkage forms the Lewis B antigen (LeB) (Kelly et al. 1995, Koda et al. 1997). LeB is found only in secretors in around 80% of Europeans. LeB is only formed when an individual inherits both FUT3 (Le) and FUT2 (Se) genes and around 80% of individuals inherit FUT2.

**Literature references**


**Editions**

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