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(54) Title: GENETICALLY ENGINEERED BACTERIA AND METHODS FOR PREPARING A FUCOSYLATED OLIGOSACCHARIDE USING THE SAME

(57) Abstract: The invention discloses a genetically engineered bacterium and a method for preparing a fucosylated oligosaccharide using the same. The method comprises: transferring a fucosyl group of a donor to an oligosaccharide receptor by a fucosyltransferase heterologously expressed in a genetically engineered bacterium; wherein the donor is a nucleotide-activated donor, the fucosyltransferase has α -1, 2-fucosyltransferase activity; wherein, the fucosyltransferase is selected from one or more of the enzymes corresponding to NCBI Accession Numbers WP_109047124.1, RTL12957.1, MBP7103497.1, WP_120175093.1, RYE22506.1, WP_140393075.1 and HJB91111.1. The preparation method of the invention has high yield, greatly improved substrate conversion rate and product conversion rate, and has the potential to be applied to industrial production.



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