

Title (en)

METHOD FOR THE PRODUCTION OF CARBOHYDRATES

Title (de)

VERFAHREN ZUR HERSTELLUNG VON KOHLENHYDRATEN

Title (fr)

PROCEDE DE PRODUCTION D'HYDRATES DE CARBONE

Publication

EP 1346032 A2 20030924 (DE)

Application

EP 01989498 A 20011121

Priority

- DE 10063889 A 20001221
- DE 10106163 A 20010210
- EP 0113524 W 20011121

Abstract (en)

[origin: WO0250257A2] The invention relates to nucleic acids coding for modified polypeptides with fructosyltransferase activity, the vectors containing said nucleic acids for the expression of the modified fructosyltransferase in prokaryotic or eukaryotic cells, the host cells or transgenic plants containing said vectors. The invention also relates to a method for the production of high-molecular polyfructans with mainly beta -1, 2 bonds and a very low degree of branching, especially of inulin. The invention further relates to a method for the production of fructooligosaccharides using the inulin produced according to the invention or using saccharose and to a method for the production of difructose dianhydrides using the inulin produced according to the invention or saccharose. The invention additionally relates to the utilization of the inulin produced according to the invention in the production of inulin ethers and inulin esters and to the utilization of fructooligosaccharides or hydrogenated fructooligosaccharides and difructose dianhydrides as food additive, especially as diet food product.

IPC 1-7

C12N 9/10; C12N 15/11; C12N 15/82; C12N 15/63; C07K 16/16; C12P 19/04

IPC 8 full level

A01H 5/00 (2006.01); **A23L 33/00** (2016.01); **A61K 31/7016** (2006.01); **A61K 31/702** (2006.01); **A61P 3/04** (2006.01); **C07H 3/04** (2006.01); **C07H 3/06** (2006.01); **C07K 16/40** (2006.01); **C07K 16/42** (2006.01); **C08B 37/18** (2006.01); **C12N 5/10** (2006.01); **C12N 9/10** (2006.01); **C12N 15/09** (2006.01); **C12N 15/82** (2006.01); **C12P 19/12** (2006.01); **C12P 19/14** (2006.01); **C12P 19/18** (2006.01); **C12P 21/08** (2006.01)

CPC (source: EP US)

A61P 3/04 (2017.12 - EP); **C12N 9/1051** (2013.01 - EP US); **C12N 15/8246** (2013.01 - EP US); **C12P 19/18** (2013.01 - EP US); **A01K 2217/05** (2013.01 - EP US)

Citation (search report)

See references of WO 0250257A2

Citation (examination)

- WO 9601904 A1 19960125 - STICHTING SCHEIKUNDIG ONDERZOE [NL], et al
- EP 0332108 A2 19890913 - MITSUBISHI CHEM IND [JP]
- KIM DONG HYUN ET AL: "Production of inulo-oligosaccharides using endo-inulinase from a Pseudomonas sp.", BIOTECHNOLOGY LETTERS, vol. 19, no. 4, 1997, pages 369 - 371, ISSN: 0141-5492
- EBISU S ET AL: "Structural differences in fructans elaborated by Streptococcus mutans and Strep. salivarius", JOURNAL OF BIOCHEMISTRY, vol. 78, no. 5, 1975, pages 879 - 887, XP008067870, ISSN: 0021-924X
- KANG S ET AL.: "Purification and properties of an endo-inulinase from Arthrobacter sp.", BIOTECHNOLOGY LETTERS, vol. 20, no. 10, October 1998 (1998-10-01), pages 983 - 986
- MENNE E ET AL: "Fn-type chicory inulin hydrolysate has a prebiotic effect in humans", THE JOURNAL OF NUTRITION, vol. 130, no. 5, May 2000 (2000-05-01), pages 1197 - 1199, XP002194170
- NAHN A N ET AL: "Immunization with dextranases, levansucrases and glycosidic hydrolases from oral streptococci. II. Immunization with glucosyltransferases, fructosyltransferases and glycosidic hydrolases from oral Streptococci in monkeys.", JOURNAL OF DENTAL RESEARCH, vol. 56, no. 12, December 1977 (1977-12-01), pages 1586 - 1598

Designated contracting state (EPC)

AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR

DOCDB simple family (publication)

WO 0250257 A2 20020627; WO 0250257 A3 20030130; AU 2793902 A 20020701; CA 2431994 A1 20020627; EP 1346032 A2 20030924; JP 2004524826 A 20040819; MX PA03005645 A 20040421; US 2004086902 A1 20040506

DOCDB simple family (application)

EP 0113524 W 20011121; AU 2793902 A 20011121; CA 2431994 A 20011121; EP 01989498 A 20011121; JP 2002552134 A 20011121; MX PA03005645 A 20011121; US 45089603 A 20031208