Isolated chromosomal region, used to identify a genotype responsible for raised digestibility in maize, is identified by UMC 67 and UMC 128 markers on chromosome 1 or bnlg 1046 and bnlg 609 markers on chromosome 5

Número(s) de patente: WO200155395-A1; FR2804970-A1; AU200131932-A; EP1250440-A1; US2003175732-A1

Inventor(es): PUIGDOMENECH P, PEREZ P, MURIGNEUX A, MARTINANT J, TIXIER M, RIGAU J, CIVARDI L, MAES T, MARTINANT J P, TIXIER M H, PUIGDOMENECH P C C D

Código(s) y nombre(s) de cesionario(s) de patente: BIOGEMMA (BIOG-Non-standard)
BIOGEMMA SAS (BIOG-Non-standard)
PUIGDOMENECH P(PUIG-Individual)
PEREZ P(PERE-Individual)
MURIGNEUX A(MURI-Individual)
MARTINANT J(MART-Individual)
TIXIER M(TIXI-Individual)
RIGAU J(RIGA-Individual)
CIVARDI L(CIVA-Individual)
MAES T(MAES-Individual)

Número de acceso primario Derwent: 2001-465575

Patentes citadas por examinador: 18 **Artículos citados por examinador: 59**

Abstract: NOVELTY - Chromosomal region (I) identified as a quantitative trait locus (QTL) for maize digestibility defined by (a) the UMC 67 and UMC 128 markers on chromosome 1; or (b) bnlg 1046 and bnlg 609 markers on chromosome 5, is new.

USE - (I) is used as a probe or primer to identify a genotype at least partially responsible for raised digestibility in maize or for screening for inherited (sic) QTL for maize digestibility (claimed). (I) is also used to determine digestibility in maize or a correlation between the haplotype of QTL for maize digestibility and its digestibility, to select maize with raised digestibility, and to obtain a genetically transformed maize plant (all claimed).

DESCRIPCIÓN DETALLADA - INDEPENDENT CLAIMS are also included for the following:

(1) using (I) or a part of (I) as a probe or primer to identify a genotype at least partially responsible for raised digestibility in maize or for screening for inherited (sic) QTL for maize digestibility;

(2) determining (M1) a correlation between the haplotype of QTL for maize digestibility and its digestibility, comprising:

(a) haplotyping all or a part of (I) in maize descendents where (I) has been identified as a QTL for maize digestibility; and/or

(b) haplotyping all or a part of (I) in maize descendents which are not similar to those in (a);

(c) determining digestibility in these descendents; and

(d) correlating haplotype and digestibility;

(3) determining (M2) digestibility in maize, comprising:

(a) haplotyping all or a part of (I) in maize descendents where (I) has been identified as a QTL for maize digestibility; and

(b) using M1 to determine a predictive digestibility value;

(4) selecting (M3) maize characterized by a raised digestibility, comprising:

(a) haplotyping all or a part of (I) in maize descendents where (I) has been identified as a QTL for maize digestibility; and

(b) using M2 to select plants with a raised predictive digestibility value;

(5) selecting (M4) maize with a slightly raised digestibility, comprising: using (I) or a part of (I) as a probe or primer to genotype maize plants; and selecting from them those which comprise a high frequency of alleles associated with digestibility; and

(6) obtaining (M5) genetically modified maize with a raised digestibility, comprising:

(a) transforming a maize plant cell with at least two nucleotide (nt) sequences coding for different enzymes, where the sequences are alleles favorable for raised digestibility coding for CCR, 4CL2, 4CL1, CAD or F5H; and

(b) regenerating a transgenic plant from the transformed cell.

Clasificación internacional de patentes: C12N-015/29; A01H-005/00; C12N-015/82; C12Q-001/68; A01H-001/04; C12N-015/52

Código(s) de clase Derwent: B04 (Natural products and polymers. Including testing of body fluids (other than blood typing or cell counting), pharmaceuticals or veterinary compounds of unknown structure, testing of microorganisms for pathogenicity, testing of chemicals for mutagenicity or human toxicity and fermentative production of DNA or RNA. General compositions.); D16 (Fermentation industry - including fermentation equipment, brewing, yeast production, production of pharmaceuticals and other chemicals by fermentation, microbiology, production of vaccines and antibodies, cell and tissue culture and genetic engineering.); P13 (Plant culture, dairy products (A01G, H, J).)

Código(s) de manual Derwent: B04-A08C2E; B04-E01; B04-E05; B11-C08E5; B12-K04D; B12-K04E; B12-K04F; D05-H09; D05-H12A; D05-H12D1; D05-H16B; D05-H18

Detalles de patente:

Número de patente	Fecha de Publicación	IPC principal	Semana	Número de páginas	Idioma
WO200155395-A1	02 Aug 2001	C12N-015/29	200150	Pages: 41	French
FR2804970-A1	17 Aug 2001	C12N-015/29	200155		French
AU200131932-A	07 Aug 2001	C12N-015/29	200174		English
EP1250440-A1	23 Oct 2002	C12N-015/29	200277		French
US2003175732-A1	18 Sep 2003	C12Q-001/68	200362		English

Detalles de la solicitud:

WO200155395-A1	WOFR00272	29 Jan 2001
FR2804970-A1	FR001152	28 Jan 2000
AU200131932-A	AU031932	29 Jan 2001
EP1250440-A1	EP903991	29 Jan 2001
US2003175732-A1	US182113	25 Nov 2002

Más detalles de la solicitud:

AU200131932-A	Based on	Patent	WO200155395
EP1250440-A1	PCT application	Application	WOFR00272
EP1250440-A1	Based on	Patent	WO200155395
US2003175732-A1	PCT application	Application	WOFR00272

Fecha e información de prioridad de solicitud:

FR001152	28 Jan 2000

Estados o países designados:
WO200155395-A1:
(Nacional): AE; AG; AL; AM; AT; AU; AZ; BA; BB; BG; BR; BY; BZ; CA; CH; CN; CR; CU; CZ; DE; DK; DM; DZ; EE; ES; FI; GB; GD; GE; GH; GM; HR; HU; ID; IL; IN; IS; JP; KE; KG; KP; KR; KZ; LC; LK; LR; LS; LT; LU; LV; MA; MD; MG; MK; MN; MW; MX; MZ; NO; NZ; PL; PT; RO; RU; SD; SE; SG; SI; SK; SL; TJ; TM; TR; TT; TZ; UA; UG; US; UZ; VN; YU; ZA; ZW
(Regional): AT; BE; CH; CY; DE; DK; EA; ES; FI; FR; GB; GH; GM; GR; IE; IT; KE; LS; LU; MC; MW; MZ; NL; OA; PT; SD; SE; SL; SZ; TR; TZ; UG; ZW
EP1250440-A1:
(Regional): AL; AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI; LT; LU; LV; MC; MK; NL; PT; RO; SE; SI; TR

Compuesto(s):

Número DCR	Función	Número DCR	Función	Número DCR	Función
200757-0-0-0	(N P)	200799-0-0-0	(N P)	93605-0-0-0	(A D N)
184610-0-0-0	(D N)	200757-0-0-0	(CL NEW PRD)	93605-0-0-0	(CL DET NEW)
184610-0-0-0	(CL NEW)				

Número(s) de compuesto Derwent:

Número de compuesto	Función	Número de compuesto	Función	Número de compuesto	Función
RA00GT	(N P)	RA00NS	(A D N)	RA013I	(D N)