

Title (en)
RECOMBINANT ACC SYNTHASE

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EP 0548164 A4 19940608 (EN)

Application
EP 91916215 A 19910910

Priority
US 57989690 A 19900910

Abstract (en)
[origin: WO9204456A1] Isolation of the cDNA encoding the ACC synthase of zucchini using a novel isolation method permits the recovery of ACC synthase genes from a variety of higher plant sources. The ACC synthases are coded by multigene families, the members of which may be responsible for various plant development characteristics effected by ethylene. Recombinant production of ACC synthase and thereby in vitro production of ACC, ethylene and ethanol is also enabled by use of this gene. In addition, control of the processes in plants which are mediated by ACC synthase can be effected using antisense technology or by the use of mutated ACC synthase genes.

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C12N 15/82

IPC 8 full level
A01H 5/00 (2006.01); **A61K 36/18** (2006.01); **C12N 1/21** (2006.01); **C12N 5/10** (2006.01); **C12N 9/88** (2006.01); **C12N 15/00** (2006.01);
C12N 15/10 (2006.01); **C12N 15/64** (2006.01); **C12N 15/82** (2006.01); **C12P 5/02** (2006.01); **C12P 13/00** (2006.01); **C12P 21/08** (2006.01);
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CPC (source: EP)
C12N 9/88 (2013.01); **C12N 15/10** (2013.01); **C12N 15/64** (2013.01); **C12N 15/8249** (2013.01); **C12P 5/026** (2013.01)

Citation (search report)

- [PX] WO 9101375 A1 19910207 - ICI PLC [GB]
- [XY] SATO, T., ET AL.: "Cloning the mRNA encoding 1-aminocyclopropane-1-carboxylate synthase, the key enzyme for ethylene biosynthesis in plants", PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF USA, vol. 86, no. 9, September 1989 (1989-09-01), WASHINGTON US, pages 6621 - 6625, XP002066628, DOI: doi:10.1073/pnas.86.17.6621
- [X] THEOLOGIS, A., ET AL.: "ACC synthase genes in Zucchini and Tomato", NATO ASI SERIES, SER. A., (PLANT MOL. BIOL. 2.) NATO ADVANCED STUDY INSTITUTE HELD AT ELMAU (GERMANY); MAY 1990., vol. 212, pages 737 - 746
- [X] ROTTMANN, G.F.P., ET AL.: "The tomato ACC synthase gene involved in fruit ripening", J. CELL. BIOCHEM. SUPPL., vol. 14E, 1990, pages 356
- [Y] HAMILTON , A.J., ET AL.: "Antisense gene that inhibits synthesis of the hormone ethylene in transgenic plants", NATURE, vol. 346, 19 July 1990 (1990-07-19), LONDON GB, pages 284 - 287, XP002919320, DOI: doi:10.1038/346284a0
- [X] JEFFERSON, R.A., ET AL.: "GUS fusions: beta-glucuronidase as a sensitive and versatile gene fusion marker in higher plants", EMBO JOURNAL, vol. 6, no. 13, 1987, EYNSHAM, OXFORD GB, pages 3901 - 3907
- See references of WO 9204456A1

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EP 0548164 A1 19930630; EP 0548164 A4 19940608; JP H06502759 A 19940331; MX 9100993 A 19920504

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