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Biosequences in DGENE
- Peptide and nucleic acid sequences from 1981 to date
- From the basic patent publications of 41 authorities of DWPI
- Organism and sequence length
- Feature tables for modifications and other features

DGENE records also provide
- English abstracts written per sequence by Thomson Scientific experts
- Enhanced patent titles and bibliographic data from DWPI
- Integrated Patent Family and Legal Status display
- Full-text links to Esp@cenet and the USPTO

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**ACCESSION NUMBER:** AAB10698 **Protein** DGENE

**TITLE:** An isolated polypeptide (I) possessing beta-(1,3) exoglucanase activity for improvement of plant resistance to fungal phytopathogens and to promote growth

**INVENTOR:** Frick M M; Huang T Y; Cheng K J; Lu Z; Laroche A J; Huang H C

**PATENT ASSIGNEE:** (MIAC) CANADA MIN AGRIC & AGRI-FOOD CANADA.

**PATENT INFO:** CA 2325774 A1 20010610 86p

**APPLICATION INFO:** US 1999-170168P 19991210

**DATA ENTRY DATE:** 10 DEC 2001 (first entry)

**OTHER SOURCE:** 2001-409063 [44]

**CROSS REFERENCES:** N-PSDB: AAD18016

**DESCRIPTION:** *Coniothyrium minitans* beta-(1,3) exoglucanase, cbeg1.

**KEYWORD:** Beta-(1,3) exoglucanase gene; cbeg1; laminarin; plant resistance; fungal phytopathogen; microbial transgenic strategy; feed digestion; forage feed; industrial application; pulp bleaching; monocot; dicot; antifungal; growth promoter; EC 3.2.1.58.

**ORGANISM:** *Coniothyrium minitans*.

**ABSTRACT:** The invention relates to nucleotide sequence of a novel beta-(1,3) exoglucanase gene denoted as cbeg1 of the soil borne fungus *Coniothyrium minitans*. Beta-(1,3) exoglucanase (EC 3.2.1.58) is an enzyme that catalyses the successive hydrolysis of beta-D-glucose units from the non-reducing ends of 1,3-beta-D-glucans, releasing alpha-glucose. cbeg1 is specific for the substrate laminarin. cbeg1 sequences are useful for improvement of plant resistance to fungal phytopathogens or use in ruminant microbial transgenic strategies to improve feed digestion and nutritive carbohydrate availability from forage feed. cbeg1 is also useful for use in high temperature industrial applications such as bleaching of pulp. cbeg1 is useful as an antifungal in dicots and to promote plant growth in monocots and dicots. The present sequence is *Coniothyrium minitans* cbeg1 protein.

**AMINO ACID COUNTS:** 73 A; 19 R; 61 N; 39 D; 0 B; 11 C; 33 Q; 18 E; 0 Z; 77 G; 13 H; 52 I; 50 L; 31 K; 14 M; 25 F; 42 P; 68 S; 59 T; 16 W; 29 Y; 55 V; 0 Others

**SEQUENCE LENGTH:** 785

**SEQUENCE:**
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151 iailidaspyq dgtqkgwtx tnvfrqirn vfdltipta tsgaqahwp
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1. **Molecule Type (MTY)**
2. Thomson enhanced patent title describing the over all invention
3. Bibliographic information – Publica tion, application, assignee & inventor data
4. Patent Sequence Location – claim, example, etc
5. Other Source accession number – link to Derwent World Patents Index® patent family data
6. Thomson description, keywords and enhanced abstract describe the context and use of each patent sequence
7. Organism – latin genus & species, from which the sequence is derived
8. Sequence Length and individual amino acid & nucleotide count fields
9. Patent sequence – each DGENE record is based upon a sequence
10. Feature table – includes modifications and features added by the applicant, and by the Thomson Analyst