

Native *Streptomyces griseus* Chitinase

Cat. No. NATE-0123

Lot. No. (See product label)

Introduction

Description

Chitinase is an extracellular enzyme complex that degrades chitin and has a molecular mass of approximately 30 kDa. Chitin is degraded to N-acetyl-D-glucosamine in 2 enzymatic reactions. Firstly, chitobiose units are removed from chitin by chitodextrinase-chitinase. The second reaction involves N-acetyl-glucosaminidase-chitobiase, which cleaves the disaccharide to its monomer subunits (that comprise of N-acetyl-D-glucosamine).

Applications

Chitinase from *Streptomyces griseus* has been used to study the effect of the allosamidin on the regulatory system for chitinase production. It has also been used to study the enrichment of chitinolytic microorganisms. This enrichment was achieved by the isolation and characterization of a chitinase with antifungal activity against phytopathogenic fungi. The enzyme from Creative Enzymes has been used as a standard for chitinase assays using the enzyme derived from *Absidia glauca* and *Petunia hybrida* extracts.

Synonyms

Chitinase; chitodextrinase; 1,4- β -poly-N-acetylglucosaminidase; poly- β -glucosaminidase; β -1,4-poly-N-acetyl glucosaminidase; poly[1,4-(N-acetyl- β -D-glucosaminide)] glycanohydrolase; (1 \rightarrow 4)-2-acetamido-2-deoxy-beta-D-glucan glycanohydrolase; EC 3.2.1.14

Product Information

Source

Streptomyces griseus

Form

lyophilized powder (essentially salt free).

EC Number

EC 3.2.1.14

CAS No.

9001-06-3

Activity

> 200 units/g solid

Unit Definition

One unit will liberate 1.0 mg of N-acetyl-D-glucosamine from chitin per hour at pH 6.0 at 25°C in a 2 hour assay. One new 1 hour unit = approx. 50 old 48 hour units.

Storage and Shipping Information

Storage

-20°C