Creative Enzymes®

Native Bacillus sp Chitosanase

Cat. No. NATE-1746

Lot. No. (See product label)

Introduction

Description Chitosanase is a powdered chitosanase preparation made by submerged fermentation of a selected strain of the bacterium Bacillus sp. The enzyme catalyzes the breakdown of chitosan, a partially or completely de-acetylated derivative of chitin (β-1,4 homopolymer of N-acetyl glucosamine).

Applications Chitosanase can be used for hydrolyzing chitosan(degree of de-acetylatin: 40～100%). Especially, it can be used for the production of chitosan oligosaccharides from chitosan, which have a variety of biological activities such as immuno-stimulating activity, anti-tumor activity, anti-microbial activity, etc.

Synonyms Chitosanase; EC 3.2.1.132; 51570-20-8; Chitosan N-acetylglucosaminohydrolase

Product Information

Source Bacillus sp

Appearance White or light yellow colored, freeze-dried powder

EC Number EC 3.2.1.132

CAS No. 51570-20-8

Molecular Weight 45,000Da estimated by SDS-PAGE

Activity 35,000U/g

pH Stability Stable in pH range of 4.5 to 8.0

Optimum pH pH range of 4.5 to 6.0

Thermal stability More than 90% activity remains after 24 hr incubation at 40°C.

Optimum temperature 60°C

Specificity Shows high activities against chitosan substrates which are de-acetylated by 40 to 100%.

Unit Definition The standard activity is determined by modified Schales method. One unit(U) is defined as the amount of enzyme that releases one μmole of reducing sugar (measured as D-glucosamine equivalents) from chitosan per minute at pH 5.0 at 48°C. A detailed description of the method is available on request.

Notes Arsenic: Less than 4ppm. Heavy metals: Less than 10ppm (as Pb). Coli-form bacteria: Less than 30 colony-forming units(CFU) per gram. Samonella: Negative.

Storage and Shipping Information

Storage The product should be stored in a cool, dry environment with temperatures below 4°C.