

Native Sweet almond β -Glucosidase

Cat. No. DIA-195

Lot. No. (See product label)

Introduction

Description

Beta-glucosidase is a glucosidase enzyme that acts upon $\beta 1 \rightarrow 4$ bonds linking two glucose or glucose-substituted molecules (i.e., the disaccharide cellobiose). It is one of the cellulases, enzymes involved in the decomposition of cellulose and related polysaccharides; more specifically, an exocellulase with specificity for a variety of beta-D-glycoside substrates. It catalyzes the hydrolysis of terminal non-reducing residues in beta-D-glucosides with release of glucose.

Applications

This enzyme is useful for structural investigations of carbohydrates and for the enzymatic determination of α -amylase when coupled with α -glucosidase in clinical analysis.

Synonyms

EC 3.2.1.21; gentiobiase; cellobiase; emulsin; elaterase; aryl-beta-glucosidase; beta-D-glucosidase; beta-glucoside glucohydrolase; arbutinase; amygdalinase; p-nitrophenyl beta-glucosidase; primeverosidase; amygdalase; linamarase; salicilinae; beta-1,6-glucosidase.

Product Information

Source

Sweet almond

Appearance

Light yellow amorphous powder, lyophilized

Form

Freeze dried powder

EC Number

EC 3.2.1.21

CAS No.

9001-22-3

Molecular Weight

approx. 110 kDa

Activity

Gradell 10U/mg-solid or more (containing approx. 50% of BSA)

Contaminants

α -Amylase < $5.0 \times 10^{-4}\%$

Isoelectric point

7.3

pH Stability

pH 6.0-9.0 (25°C, 64hr)

Optimum pH

5.5

Thermal stability

below 50°C (pH 7.3, 1hr)

Optimum temperature

50-55°C

Michaelis Constant

$2.8 \times 10^{-3}\text{M}$ (p-Nitrophenyl- β -D-glucopyranoside), $3.3 \times 10^{-3}\text{M}$ (2,4-Dichlorophenyl- β -D-glucopyranoside)

Structure

2 subunits per mol of enzyme

Stabilizers

Bovine serum albumin (BSA), glutathione (reduced)

Storage and Shipping Information

Stability

Stable at -20°C for at least 6 months (A decrease in activity of ca. 10% may occur at 5°C within 6 months)