Creative Enzymes®

Cellulase, thermostable from Clostridium thermocellum, Recombinant

Cat. No. NATE-0121

Lot. No. (See product label)

Introduction

Description	Cellulase is any of several enzymes produced chiefly by fungi, bacteria, and protozoans that catalyze cellulolysis, the decomposition of cellulose and of some related polysaccharides; specifically, the hydrolysis of the 1,4-beta-D-glycosidic linkages in cellulose, hemicellulose, lichenin, and cereal beta-D-glucans. Cellulases break down the cellulose molecule into monosaccharides ("simple sugars") such as beta-glucose, or shorter polysaccharides and oligosaccharides. The name is also used for any naturally occurring mixture or complex of various such enzymes, that act serially or synergistically to decompose cellulosic material.
Applications	Cellulases are enzymes that hydrolyze cellulose to glucose. Cellulase is used to study the development of occupational asthma in the detergent, pharmaceutical, baking, and enzyme production industries. Cellulase is added to detergents to improve cleansing properties. Cellulase is from Clostridium thermocellum and is recombinant and expressed in E. coli.
Synonyms	Cellulase, thermostable; 1,4-(1,3:1,4)-β-D-Glucan 4-glucano-hydrolase; EC 3.2.1.4; Cellulase; endo-1,4-β-D-glucanase; β-1,4-glucanase; β-1,4-endoglucan hydrolase; celluase A; cellulosin AP; endoglucanase D; alkali cellulase; cellulase A 3; celludextrinase; 9.5 cellulase; avicelase; pancellase SS

Product Information

Species	Clostridium thermocellum
Source	E. coli
Form	liquid. Supplied as as solution in 50 mM Tris-HCl, pH 7.5, 100 mM NaCl, and 25% glycerol.
EC Number	EC 3.2.1.4
CAS No.	9012-54-8
Activity	> 40 units/mg protein
Unit Definition	One unit will produce 1 µmole of reducing sugar (measured as glucose) from β-glucan per minute at pH 5.8 at 70°C.

Storage and Shipping Information

Storage	2-8°C