Creative Enzymes®

Native Environmental DNA Pustulanase (β-glucanase)

Cat. No. NATE-0645

Lot. No. (See product label)

Introduction

Description	A thermostable β-1,6-endoglucanase or pustulanase (E.C. 3.2.1.75) which catalyses the cleavage of β-1,6 bonds in pustulan and other beta-glucans containing 1,6 linked glucose units. The enzyme is now a component in a standard assay for beta-glucan from Baker's yeast as documented in US Pharmacopeia Food and Chemicals Index.
Synonyms	EC 3.2.1.75; glycoside hydrolase; pustulanase; glucan endo-1,6-β-glucosidase; 6-β-D-glucan glucanohydrolase; endo-1,6-β-glucanase; β-1→6)-β-D-glucanase; β-1,6-glucanase-pustulanase; β-1,6-glucan hydrolase; β-1,6-glucan 6-glucanohydrolase; 1,6-β-D-glucan glucanohydrolase

Product Information

Species	Environmental DNA
Source	Proprietary metagenome environmental DNA
EC Number	EC 3.2.1.75
CAS No.	37278-39-0
Optimum pH	suitable pH range is about 5-8 with optimum around 5.5
Optimum temperature	The enzyme is relatively active in a rather broad temperature range (65-90°C)with optimum around 80°C
Specificity	Cel136 Beta-glucanase (Pustulanase) Cel136 hydrolyses β-glucan polysaccharides with β-(1,6) linkages such as Pustulan (β-(1,6)-D-glucan) and Gentiobiose (β-(1,6)-linked disaccharide) or β-glucans with mixed linkages, including β-(1,6) linkages, such as Laminarin (β-(1,3/1,6)-D-glucan) and Yeast β-glucan (β-(1,3/1,6)-D-glucan). Substrate specificity analysis (below) indicates that the enzyme does not cleave β-(1,3) or β-(1,4) linkages as it does not show activity on the β-glucans Lichenan (β-(1,3/1,4)-D-glucan) or CM-Cellulose (β-(1,4)-D-glucan).
Unit Definition	One unit (U) of enzyme activity is the amount that leads to the release of 1 μmol reducing sugars per minute.