

## Cellulase 5C & Acetyl xylan esterase 2A from *Clostridium thermocellum*, Recombinant

Cat. No. NATE-1374

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.

**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; cellulase A; cellulysin AP; endoglucanase D; alkali cellulase; cellulase A 3; celludextrinase; 9.5 cellulase; avicelase; pancellase SS

### Product Information

<b>Species</b>	<i>Clostridium thermocellum</i>
<b>Source</b>	<i>E. coli</i>
<b>Form</b>	35 mM NaHepes buffer, pH 7.5, 750 mM NaCl, 200 mM imidazol, 3.5 mM CaCl <sub>2</sub> , 0.02% sodium azide and 25% (v/v) glycerol
<b>EC Number</b>	EC 3.2.1.4 & EC 3.2.1.72
<b>CAS No.</b>	9012-54-8
<b>Molecular Weight</b>	88.9 kDa
<b>Purity</b>	>90% by SDS-PAGE
<b>Activity</b>	Cellulase 5C: 130 U/mg and Acetyl xylan esterase 2A: 74 U/mg
<b>Concentration</b>	1 mg/mL
<b>Optimum pH</b>	6.5-8
<b>Optimum temperature</b>	60 °C
<b>Specificity</b>	Soluble forms of cellulose and 1,3-1,4-β-glucans (GH5) while releasing acetate from acetylated xylan, glucomannan and galactoglucomannan (CE2)

### Storage and Shipping Information

**Storage** This enzyme is shipped at room temperature but should be stored at -20 °C.