



β-AMYLASE from *B. cereus*. (Lot I3030Ia)

Recombinant

E-BAMBC

05/14

(EC 3.2.1.2) 4- α -D-glucan maltohydrolase

CAZy: GH Family 16

PROPERTIES

1. ELECTROPHORETIC PURITY:

- Single band on SDS-gel electrophoresis (MW=59,250)
- Single major band on isoelectric focusing (pI ~ 6.4)

2. SPECIFIC ACTIVITY:

2182 U/mg protein (on soluble Starch) at pH 6.5 and 40°C.

One Unit of β -amylase activity is defined as the amount of enzyme required to release one μ mole of maltose reducing-sugar equivalents per minute from soluble starch (10 mg/mL) in sodium phosphate buffer (100 mM) pH 6.5.

3. RELATIVE RATES OF HYDROLYSIS OF SUBSTRATES:

Substrate	%
Starch (soluble)	100
<i>p</i> -NP- β -D-maltoheptaoside (amyloglucosidase)	< 0.0001
Blocked <i>p</i> -NP- β -D-maltoheptaoside (alpha-amylase)	< 0.0001

Action on polysaccharide and *p*-NP substrates was determined at final substrate concentrations of 5 mg/mL (starch), 5 mM (*p*-NP- β -D-maltoheptaoside_ and 2 mM (Blocked *p*-NP- β -D-maltoheptaoside) in sodium phosphate buffer (100 mM), pH 6.5 at 40°C.

4. PHYSICOCHEMICAL PROPERTIES:

- pH Optima: 6.5
 pH Stability: 4.0 - 9.0 (> 75% control activity after 24 hours at 4°C)
 Temperature Optima: 40°C (10 min. reaction)
 Temperature Stability: up to 50°C (> 90% control activity after 15 min.)

5. STORAGE CONDITIONS:

The enzyme is supplied as an ammonium sulphate suspension in 0.02% (w/v) sodium azide and should be stored at 4°C. For assay, this enzyme should be diluted in sodium phosphate buffer (100 mM), pH 6.5 containing 1 mg/mL BSA. **Swirl to mix the enzyme immediately prior to use.**