Oligo-α-(1,4-1,6)-GLUCOSIDASE (*Bacillus sp.*) (Lot 140901)

Recombinant

E-MALBS **03/15**

(EC 3.2.1.10) oligo-1,6-glucosidase; oligosaccharide 6-alpha-glucohydrolase
CAZy: GH Family 13
CAS: 9032-15-9

PROPERTIES

1. ELECTROPHORETIC PURITY:

- Single band on SDS-gel electrophoresis (MW ~ 66,900)
- One major band on isoelectric focusing (pI ~ 5.4)

2. SPECIFIC ACTIVITY:

87 U/mg protein (on *p*-nitrophenyl-α-D-glucopyranoside) at pH 7.0 and 40°C.

One Unit of oligo-α-(1,4-1,6)-glucosidase activity is defined as the amount of enzyme required to release one µmole of *p*-nitrophenol (*p*NP) per minute from *p*-nitrophenyl-α-D-glucopyranoside (5 mM) in sodium phosphate buffer (100 mM), pH 7.0 at 40°C.

3. SPECIFICITY:

Hydrolysis of terminal non-reducing α-(1,4-1,6)-linked D-glucose residues in oligosaccharides from some oligosaccharides produced from starch and glycogen.

4. RELATIVE RATES OF HYDROLYSIS OF SUBSTRATES:

Substrate	%
*p*NP-α-D-Glucopyranoside	100
6^3-α-D-Glucosyl-maltotriose (**O-GMT**)	~ 20
6^3-α-D-Glucosyl-maltotriosyl-maltotriose (**O-GMH**)	~ 5.2
Isomaltose	~ 42
Lactose	< 0.02
Maltose	~ 6.2
Panose	~ 15
Sucrose	~ 30
Trehalose	~ 0.05

Action on disaccharide and *p*NP substrates was determined at final concentration of 5 mg/mL and 5 mM respectively, in sodium phosphate buffer (100 mM), pH 7.0 at 40°C.

5. PHYSICOCHEMICAL PROPERTIES:

Recommended conditions of use are at pH 6.0-8.0 and up to 40°C

pH Optima:	7.0
pH Stability:	6.0-9.0 (> 75% control activity after 24 hours at 4°C)
Temperature Optima:	40°C (10 min reaction)
Temperature Stability:	up to 40°C

6. 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 7.0 containing 1 mg/mL BSA. **Swirl to mix the enzyme immediately prior to use.**

7. EXPERIMENTAL DATA: