



OLIGO-1,6-GLUCOSIDASE (microbial) (Lot 120501a)

Recombinant

E-OAGUM

07/14

(EC 3.2.1.10) oligosaccharide 6- α -glucohydrolase

CAZy: GH Family 13

PROPERTIES

1. ELECTROPHORETIC PURITY

- Single band on SDS-gel electrophoresis (MW ~ 67,300)
- Single major band on isoelectric focusing (pI ~ 5.4)

2. SPECIFIC ACTIVITY

321 U/mg protein (on *p*-nitrophenyl- α -D-glucopyranoside) at pH 4.5 and 50°C; 171 U/mg protein (on *p*-nitrophenyl- α -D-glucopyranoside) at pH 4.5 and 40°C.

One Unit of oligo-1,6-glucosidase activity is defined as the amount of enzyme required to release one μ mole of *p*-nitrophenol (*p*-NP) per minute from *p*-nitrophenyl- α -D-glucopyranoside (5 mM) in sodium acetate buffer (50 mM), pH 4.5.

3. RELATIVE RATES OF HYDROLYSIS OF SUBSTRATES:

| Substrate | % |
|--|---------|
| <i>p</i> -NP- α -D-Glucopyranoside | 100 |
| <i>p</i> -NP- β -D-Glucopyranoside | < 0.001 |
| <i>p</i> -NP- α -D-Galactopyranoside | < 0.001 |
| <i>p</i> -NP- β -D-Galactopyranoside | < 0.001 |
| <i>p</i> -NP- α -D-Mannopyranoside | ~ 0.05 |
| <i>p</i> -NP- β -D-Mannopyranoside | < 0.001 |
| <i>p</i> -NP- α -D-Xylopyranoside | < 0.001 |
| <i>p</i> -NP- β -D-Xylopyranoside | < 0.001 |
| 6 ³ - α -D-Glucosyl-maltotriose (O-GMT) | ~ 13 |
| 6 ³ - α -D-Glucosyl-maltotriosyl-maltotriose (O-GMH) | ~ 0.57 |
| Isomaltose | ~ 11.5 |
| Lactose | < 0.001 |
| Maltose | < 0.01 |
| Panose | ~ 21 |
| Sucrose | ~ 0.29 |
| Trehalose | < 0.01 |

Action on disaccharide and *p*-NP substrates was determined at final concentration of 5 mg/mL and 5 mM respectively, in sodium acetate buffer (100 mM), pH 4.5 at 40°C.

4. PHYSICOCHEMICAL PROPERTIES:

Recommended conditions of use are at pH 4.5 and 40°C - 50°C.

pH Optima: 4.5

pH Stability: 5.0 - 9.0 (> 75% control activity after 24 hours at 4°C)

Temperature Optima: 50°C (10 min. reaction)

Temperature Stability: up to 40°C

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 acetate buffer (50 mM), pH 4.5 containing 1 mg/mL BSA. **Swirl to mix the enzyme immediately prior to use.**