

exo-INULINASE (*Aspergillus niger*) (Lot 140902A)

Recombinant

E-EXOIAN

07/22

EC: 3.2.1.80

Synonyms: fructan beta-fructosidase; beta-D-fructan fructohydrolase

Also assigned to EC: 3.2.1.26

Synonyms: beta-fructofuranosidase; beta-D-fructofuranoside fructohydrolase

CAZy Family: GH32

CAS: 37288-56-5

PROPERTIES

1. ELECTROPHORETIC PURITY:

- Single band on SDS-gel electrophoresis (MW ~ 58,400)
- Single major band on isoelectric focusing (pI ~ 5.4)

2. SPECIFIC ACTIVITY:

1100 U/mg protein (on kestose) at pH 4.5 and 40°C;
~ 2200 U/mg protein (on kestose) at pH 4.5 and 60°C.

One Unit of *exo*-inulinase activity is defined as the amount of enzyme required to release one μ mole of β -D-fructose reducing-sugar equivalents per minute from kestose (10 mg/mL) in sodium acetate buffer (100 mM) at pH 4.5.

3. SPECIFICITY:

EC 3.2.1.80; Hydrolysis of terminal, non-reducing (2,1)- and (2,6)-linked β -D-fructofuranose residues in fructans.

EC 3.2.1.26; Hydrolysis of terminal, non-reducing β -D-fructofuranoside residues in β -D-fructofuranosides

4. RELATIVE RATES OF HYDROLYSIS OF SUBSTRATES:

Substrate	%
Kestose	100
Sucrose	143
Raffinose	36
Inulin (dahlia)	11

Action on all substrates was determined at final concentration of 5 mg/mL in sodium acetate buffer (100 mM), pH 4.5 at 60°C.

5. **PHYSICOCHEMICAL PROPERTIES:**

Recommended conditions of use are at pH 3.5-4.5 and up to 40°C-80°C.

pH Optima: 3.5-4.5

pH Stability: 3.0-9.0 (> 75% control activity after 24 hours at 4°C)

Temperature Optima: 50-60°C (10 min. reaction)

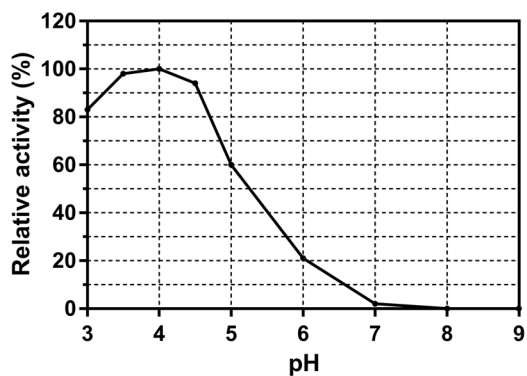
Temperature Stability: up to 50°C

6. **STORAGE CONDITIONS:**

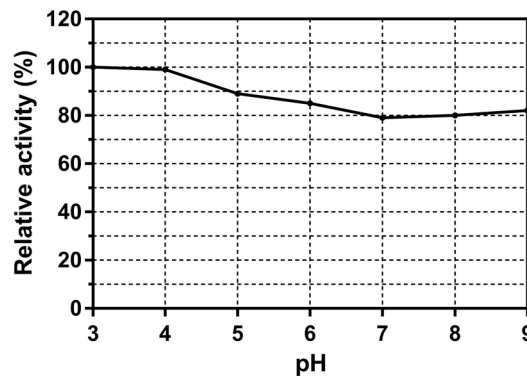
The enzyme is supplied as an ammonium sulphate suspension containing 0.02% (w/v) sodium azide and should be stored at 4°C. For assay, this enzyme should be diluted in sodium acetate buffer (100 mM), pH 4.5 containing 1 mg/mL BSA. **Swirl to mix the enzyme immediately prior to use.**

7. **EXPERIMENTAL DATA:**

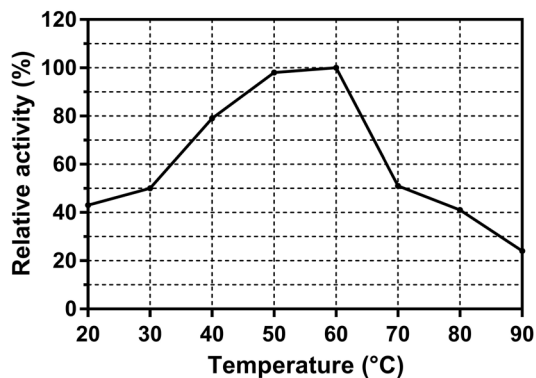
pH Optima



pH Stability



Thermal Optima



Thermal Stability

