endo-1,4-β-MANNANASE from *C. japonicus* (Lot 90901c)

Recombinant

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(EC 3.2.1.78) mannan endo-1,4-beta-mannosidase; 4-beta-D-mannan mannanohydrolase
CAZy Family: GH26
CAS: 37288-54-3

PROPERTIES

1. ELECTROPHORETIC PURITY:

- Single band on SDS-gel electrophoresis (MW ~ 45,200)
- One major band on isoelectric focusing (pI ~ 5.7)

2. SPECIFIC ACTIVITY:

260 U/mg protein (on carob galactomannan) at pH 7.0 and 40°C

One Unit of mannanase activity is defined as the amount of enzyme required to release one µmole of mannose reducing-sugar equivalents per minute from carob galactomannan (5 mg/mL) in sodium phosphate buffer (100 mM), pH 7.0 at 40°C.

3. SPECIFICITY:

Random hydrolysis of (1,4)-β-D-mannosidic linkages in mannans, galactomannans and glucomannans.

4. RELATIVE RATES OF HYDROLYSIS OF SUBSTRATES:

Substrate	%
Carob Galactomannan (low viscosity)	100
CM-Cellulose 4M	< 0.001
p-NP-β-D-galactoside	< 0.001
p-NP-β-D-glucoside	< 0.001

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

5. PHYSICOCHEMICAL PROPERTIES:

Recommended conditions of use are at pH 6.5-7.5 and up to 40°C

pH Optima:	7.0
pH Stability:	5.0-9.0 (> 75% control activity after 24 h at 4°C)
Temperature Optima:	50°C (10 min reaction)
Temperature Stability:	up to 50°C (> 75% control activity after 15 min incubation at temperature)

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 0.5 mg/mL BSA. **Swirl to mix the enzyme immediately prior to use. Swirl to mix the enzyme immediately prior to use.**

7. EXPERIMENTAL DATA: