



XYLOGLUCANASE (GH74) from *Paenibacillus* sp. (Lot 140801a)

Recombinant

E-XGP74

10/15

(EC 3.2.1.155 / EC 3.2.1.151) xyloglucan-specific *endo*-beta-1,4-glucanase
CAZy GH Family 74

PROPERTIES

1. ELECTROPHORETIC PURITY:

- Single band on SDS-gel electrophoresis (MW ~ 108,000)
- Single major band on isoelectric focusing (pI ~ 4.7)

2. SPECIFIC ACTIVITY:

25 U/mg protein (on tamarind xyloglucan) at pH 6.0 and 70°C.

One Unit of xyloglucanase activity is defined as the amount of enzyme required to release one μ mole of glucose reducing-sugar equivalents per minute from xyloglucan (5 mg/mL) in sodium acetate buffer (100 mM) pH 6.0.

3. RELATIVE RATES OF HYDROLYSIS OF SUBSTRATES:

Substrate	%
Xyloglucan (Tamarind)	100
CM-Cellulose 4M	< 0.001
Barley β -Glucan	< 0.001

Action on polysaccharide substrates was determined at final substrate concentrations of 5 mg/mL in sodium acetate buffer (100 mM), pH 6.0 at 70°C.

4. PHYSICOCHEMICAL PROPERTIES:

Recommended conditions of use are at pH 4.0 - 6.0 and 40°C - 80°C.

pH Optima: 5.0 - 6.0
pH Stability: 5.0 - 9.0 (> 75% control activity after 24 hours at 4°C)
Temperature Optima: 70°C (10 min. reaction)
Temperature Stability: up to 50°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 (100 mM), pH 6.0 containing 1 mg/mL BSA. **Swirl to mix the enzyme immediately prior to use.**