



## XYLOGLUCANASE from *Paenibacillus* sp. (Lot 100701d)

### Recombinant

#### E-XEGP

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(EC 3.2.1.151) xyloglucan-specific *endo*-beta-1,4-glucanase  
CAZy: GH Family 5

### PROPERTIES

#### 1. ELECTROPHORETIC PURITY:

- Single band on SDS-gel electrophoresis (MW ~ 42,300)
- Single major band on isoelectric focusing (pI ~ 7.2)

#### 2. SPECIFIC ACTIVITY:

**69 U/mg protein (on tamarind xyloglucan) at pH 5.5 and 40°C.**

**One Unit** of xyloglucanase activity is defined as the amount of enzyme required to release one mmole of glucose reducing-sugar equivalents per minute from xyloglucan (5 mg/mL) in sodium acetate buffer (100 mM) pH 5.5.

#### 3. RELATIVE RATES OF HYDROLYSIS OF SUBSTRATES:

Substrate	%
Xyloglucan (Tamarind)	100
CM-Cellulose 4M	< 0.01
Barley $\beta$ -Glucan	< 0.02

Action on polysaccharide substrates was determined at final substrate concentrations of 5 mg/mL in sodium acetate buffer (100 mM), pH 5.5 at 40°C.

#### 4. PHYSICOCHEMICAL PROPERTIES:

- pH Optima: 5.0 - 7.0
- pH Stability: 4.0 - 9.0 (> 75% control activity after 24 hours at 4°C)
- Temperature Optima: 50°C (10 min. reaction)
- Temperature Stability: up to 50°C (> 90% control activity after 15 min.)

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