



β -D-XYLANASE from *T. maritima* (Lot 91101c)

Recombinant - Thermostable

E-XYLATM

01/14

Catalytic domain of Xyn10A from *Thermotoga maritima*

(EC 3.2.1.8) *endo*-1,4- β -D-xylanase

CAZy: GH Family 10

PROPERTIES

1. ELECTROPHORETIC PURITY:

- Single band on SDS-gel electrophoresis (MW ~ 41,700)
- Single major band on isoelectric focusing (pI ~ 5.9)

2. SPECIFIC ACTIVITY:

115 U/mg protein (on wheat arabinoxylan) at pH 5.0 and 80°C; 22 U/mg protein (on wheat arabinoxylan) at pH 5.0 and 40°C.

One Unit of xylanase activity is defined as the amount of enzyme required to release one μ mole of xylose reducing-sugar equivalents per minute from wheat arabinoxylan (5 mg/mL) in sodium acetate buffer (100 mM) pH 5.0.

3. RELATIVE RATES OF HYDROLYSIS OF SUBSTRATES:

Substrate	%
Wheat Arabinoxylan	100
CM-Cellulose 4M	~ 0.1
Barley β -Glucan	~ 0.4

Action on polysaccharide substrates was determined at a final substrate concentration of 5 mg/mL in sodium acetate buffer (100 mM), pH 5.0 at 40°C.

4. PHYSICOCHEMICAL PROPERTIES:

pH Optima: 5.0
 pH Stability: 3.0 - 9.0 (> 75% control activity after 24 hours at 4°C)
 Temperature Optima: 80°C (10 min. reaction)
 Temperature Stability: up to 90°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 5.0 containing 0.5 mg/mL BSA. **Swirl to mix the enzyme immediately prior to use.**