exo-1,4-β-D-XYLOSIDASE from *B. pumilus* (Lot 120201b)

Recombinant

E-BXSEBP **12/18**

(EC 3.2.1.37) *exo*-1,4-β-D-xylosidase; 1,4-β-D-xylan xylohydrolase
CAZy Family: GH43
CAS: 9025-53-0

PROPERTIES

1. ELECTROPHORETIC PURITY

- Single band on SDS-gel electrophoresis (MW ~ 61,000)
- Single major band on isoelectric focusing (pI ~ 5.7)

2. SPECIFIC ACTIVITY

14 U/mg protein at pH 7.5 and 35°C
~30 U/mg protein at pH 7.5 and 35°C on xylobiose

One Unit of β-xylosidase activity is defined as the amount of enzyme required to release one µmole of *p*-nitrophenol per minute from *p*-nitrophenyl-β-D-xylopyranoside (5 mM) in potassium phosphate buffer (50 mM), pH 7.5 at 35°C.

3. OTHER ACTIVITIES (as a percentage of β-xylosidase activity)

Substrate	%
p-NP-β-D-xyloside	100
p-NP-α-L-arabinofuranoside	2.0
p-NP-α-L-arabinopyranoside	< 0.02
p-NP-β-D-glucoside	< 0.01
p-NP-α-D-galactoside	< 0.01
p-NP-β-D-mannoside	< 0.01
p-NP-β-D-galactoside	< 0.002
p-NP-α-D-mannoside	< 0.004

Action on *p*-NP-substrates was determined at a final substrate concentration of 5 mM in potassium phosphate buffer (50 mM), pH 7.5 at 35°C.

4. RELATIVE RATES OF HYDROLYSIS OF SUBSTRATES

Substrate	%
Xylobiose	100*
Xylotriose	114
Xylotetraose	61
Xylopentaose	55
Xylohexaose	47
Arabinobiose	3*
Sugar Beet Arabinan	0

Action on oligosaccharide and polysaccharide substrates was determined at a final substrate concentration of 5 mM and 5 mg/mL, respectively, in Tris.HCl buffer (100 mM), pH 7.0 at 35°C.

* Hydrolysis of xylobiose and arabinobiose releases two xylose and arabinose molecules, respectively. This is accounted for in the calculation of percentage hydrolysis.

5. PHYSICOCHEMICAL PROPERTIES

pH Optimum:	7.5
Temperature Optimum:	35°C

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 potassium phosphate buffer (50 mM), pH 7.5 containing 1 mg/mL BSA. **Swirl to mix the enzyme immediately prior to use.**