**endo-1,4-β-D-XYLANASE** from *Cellvibrio mixtus* (Lot 140902a)

**Recombinant**

**E-XYNBCM** 11/17
(EC 3.2.1.8) endo-1,4-beta-xylanase; 4-beta-D-xylan xylanohydrolase
CAZy Family: GH10
CAS: 9025-57-4

**PROPERTIES**

1. **ELECTROPHORETIC PURITY:**
   - Single band on SDS-gel electrophoresis (MW ~ 41,700)
   - Single major band on isoelectric focusing (pI ~ 6.7)

2. **SPECIFIC ACTIVITY:**
   32 U/mg protein (on wheat arabinoxylan) at pH 6.5 and 40°C.
   **One Unit** of endo-1,4-β-xylanase activity is defined as the amount of enzyme required to release one μmole of xylose reducing sugar equivalents per minute from wheat arabinoxylan (5 mg/mL) in sodium phosphate buffer (100 mM), pH 6.5 at 40°C.

3. **SPECIFICITY:**
   endo-hydrolysis of (1,4)-β-D-xylosidic linkages in xylans.

4. **RELATIVE RATES OF HYDROLYSIS OF SUBSTRATES:**

<table>
<thead>
<tr>
<th>Substrate</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wheat Arabinobxylan</td>
<td>100</td>
</tr>
<tr>
<td>Barley β-glucan</td>
<td>~ 0.04</td>
</tr>
<tr>
<td>CM-Cellulose</td>
<td>&lt; 0.001</td>
</tr>
</tbody>
</table>

Action on polysaccharide substrates was determined at a final substrate concentration of 5 mg/mL in sodium phosphate buffer (100 mM), pH 6.5 at 40°C.

5. **PHYSICOCHEMICAL PROPERTIES:**

  Recommended conditions of use are at pH 6.0-7.5 and up to 50°C

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>pH Optima</td>
<td>6.5</td>
</tr>
<tr>
<td>pH Stability</td>
<td>4.0-9.0 (&gt; 75% control activity after 24 h at 4°C)</td>
</tr>
<tr>
<td>Temperature Optima</td>
<td>50°C (10 min reaction)</td>
</tr>
<tr>
<td>Temperature Stability</td>
<td>up to 50°C (&gt; 90% control activity after 15 min incubation at temperature)</td>
</tr>
</tbody>
</table>

6. **STORAGE CONDITIONS:**

   The enzyme is supplied as an ammonium sulphate suspension containing 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 6.5 containing 0.5 mg/mL BSA. **Swirl to mix the enzyme immediately prior to use.**
7. EXPERIMENTAL DATA:

**pH Optima**

**pH Stability**

**Thermal Optima**

**Thermal Stability**