α-L-ARABINOFURANOSIDASE from C. japonicus (Lot 90601c)

Recombinant
E-ABFCJ 03/15
(EC 3.2.1.55) α-L-arabinofuranosidase; α-L-arabinofuranoside arabinofuranohydrolase
CAZy: GH Family 51

PROPERTIES

1. ELECTROPHORETIC PURITY
   - Single band on SDS-gel electrophoresis (MW ~ 55,700)
   - Single major band on isoelectric focusing (pI ~ 6.6)

2. SPECIFIC ACTIVITY
   12.1 U/mg protein (on p-NP-α-L-arabinofuranoside) at pH 5.5 and 40°C

   One Unit of α-L-arabinofuranosidase activity is defined as the amount of enzyme required to release one μmole of p-nitrophenol (p-NP) per minute from p-nitrophenyl-α-L-arabinofuranoside (2.5 mM) in sodium acetate buffer (100 mM).

3. RELATIVE RATES OF HYDROLYSIS OF SUBSTRATES

<table>
<thead>
<tr>
<th>Substrate</th>
<th>%</th>
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<tbody>
<tr>
<td>p-NP-α-L-arabinofuranoside</td>
<td>100</td>
</tr>
<tr>
<td>Debranched Arabinan</td>
<td>~ 0.6</td>
</tr>
<tr>
<td>Sugar Beet Arabinan</td>
<td>~ 3.0</td>
</tr>
<tr>
<td>Wheat Arabinoxylan</td>
<td>~ 1.2</td>
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</tbody>
</table>

Action on p-NP-substrates and polysaccharide substrates was determined at a final substrate concentration of 2.5 mM and 5 mg/mL, respectively, in sodium acetate buffer (100 mM), pH 5.5 at 40°C.

4. PHYSICOCHEMICAL PROPERTIES

   pH Optima: 5.5 (p-NP-α-L-arabinofuranoside)
   pH Stability: 5.0 - 9.0 (> 75% control activity after 24 hours at 4°C)
   Temperature Optima: 50°C (10 min. reaction)
   Temperature Stability: up to 60°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.