α-L-ARABINOFURANOSIDASE from *Aspergillus nidulans* (Lot 141101b)

Recombinant

E-ABFAN   **03/19**

(EC 3.2.1.55) non-reducing end alpha-L-arabinofuranosidase; alpha-L-arabinofuranoside non-reducing end alpha-L-arabinofuranosidase; Arabinoxylan arabinofuranohydrolase axhA-2

CAZy Family: GH62

CAS: 9067-74-7

PROPERTIES

1.   **ELECTROPHORETIC PURITY:**
- Single band on SDS-gel electrophoresis (MW ~ 34,000)
- One major band on isoelectric focusing (pI ~ 4.6)

2.   **SPECIFIC ACTIVITY:**

89 U/mg protein (on wheat arabinoxylan) at pH 4.5 and 40°C

One Unit of α-L-arabinfuranosidase activity is defined as the amount of enzyme required to release one µmole of arabinose per minute from wheat arabinoxylan (10 mg/mL) in sodium acetate buffer (100 mM), pH 4.5 at 40°C.

3.   **SPECIFICITY:**

Hydrolysis of terminal, non-reducing α-L-arabinofuranose from singly substituted xylose residues in arabinoxylan (α-1,2 > α-1,3). Does not hydrolyse α-L-arabinofuranose from doubly substituted xylose residues in arabinoxylan.

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

Substrate	%
Wheat Arabinoxylan	100
Debranched Arabinan	< 0.01
Sugar Beet Arabinan	~ 1.3
*p*NP-α-L-arabinofuranoside	~ 1.8
Arabinobiose	< 0.01
A³X	~ 43
A²XX	~ 67
XA³XX	~ 92
A²XX and A³XX mixture	~ 86

Action on *p*NP-substrates and polysaccharides or oligosaccharides was determined at a final substrate concentration of 2.5 mM and 10 mg/mL, respectively, in sodium acetate buffer (100 mM), pH 4.5 at 40°C.

5.   **PHYSICOCHEMICAL PROPERTIES:**

Recommended conditions of use are at pH 4.0-6.0 and up to 40°C

|	
pH Optima:	4.5
pH Stability:	4.0-11.0 (> 75% control activity after 24 h at 4°C)
Temperature Optima:	40°C (10 min reaction)
Temperature Stability:	up to 40°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 sodium acetate buffer (100 mM), pH 4.5 containing 1 mg/mL BSA. **Swirl to mix the enzyme immediately prior to use.**
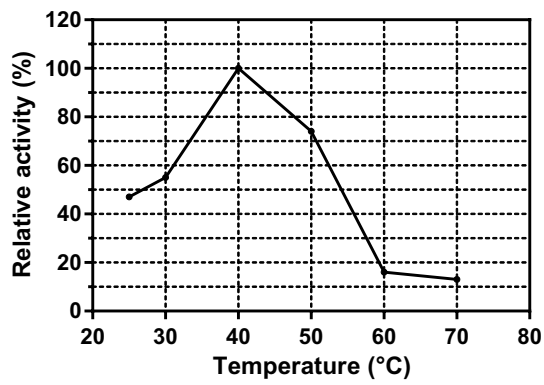
7.   EXPERIMENTAL DATA:

pH Optima
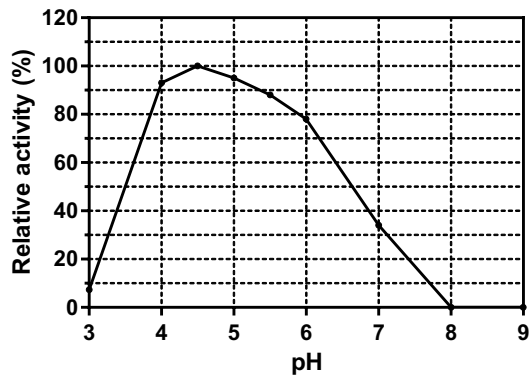
pH Stability
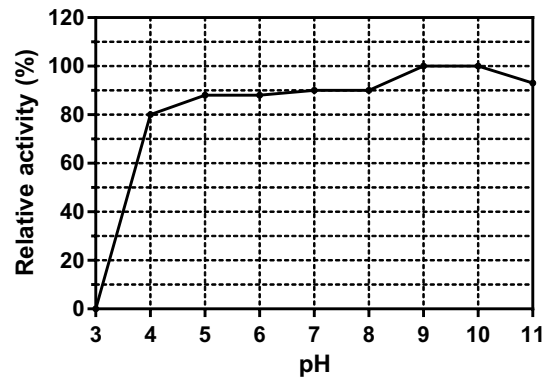
Thermal Optima

Thermal Stability