α-L-ARABINOFURANOSIDASE B21 from *Bacteroides ovatus* (Lot 150802a)

Recombinant

E-ABFBO21 **03/19**

(EC 3.2.1.55) non-reducing end alpha-L-arabinofuranosidase; alpha-L-arabinofuranoside non-reducing end alpha-L-arabinofuranosidase

CAZy Family: GH43

CAS: 9067-74-7

PROPERTIES

1. ELECTROPHORETIC PURITY:

- Single band on SDS-gel electrophoresis (MW ~ 65,000)
- One major band on isoelectric focusing (pI ~ 6.5)

2. SPECIFIC ACTIVITY:

9 U/mg protein (on wheat arabinoxylan) at pH 7.5 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 phosphate buffer (100 mM), pH 7.5 at 40°C.

3. SPECIFICITY:

Hydrolysis of terminal, non-reducing α-L-arabinofuranose from singly substituted xylose residues in arabinoxylan (α-1,2 and 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	< 0.0001
Sugar Beet Arabinan	< 0.0001
*p*NP-α-L-arabinofuranoside	< 0.0001
Arabinobiose	< 0.01
A^3X	~ 16.3
A^2XX	~ 178
XA^3XX	~ 178
XA^2XX and XA^3XX mixture	~ 178
$A^{2,3}XX$	< 0.0001

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 phosphate buffer (100 mM), pH 7.5 at 40°C.

5. PHYSICOCHEMICAL PROPERTIES:

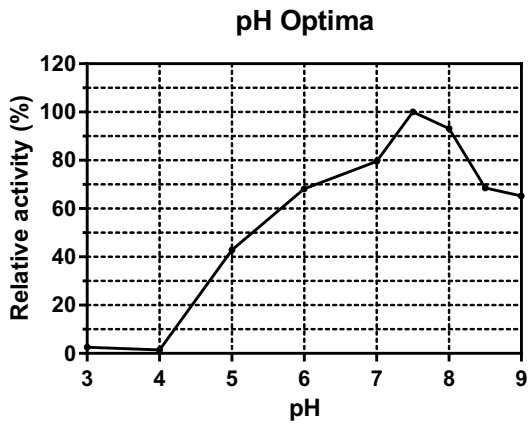
Recommended conditions of use are at pH 6.0-7.5 and up to 40°C

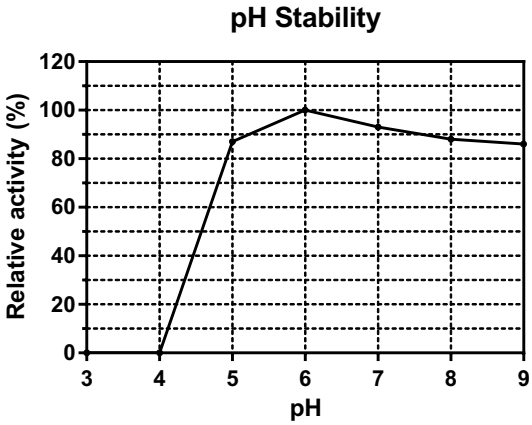
pH Optima:	7.5
pH Stability:	5.0-9.0 (> 75% control activity after 24 h at 4°C)
Temperature Optima:	50°C (10 min reaction)
Temperature Stability:	up to 40°C (> 75% control activity after 15 min incubation at temperature)

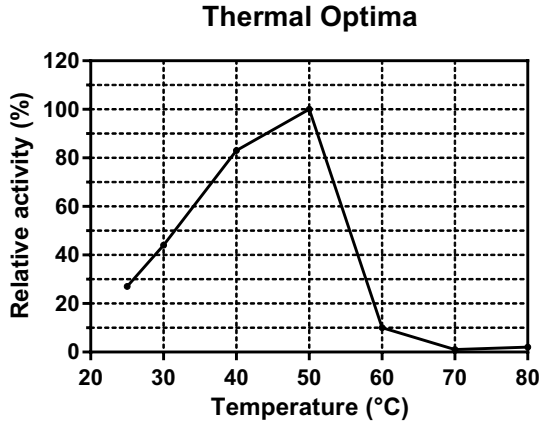
6. STORAGE CONDITIONS:

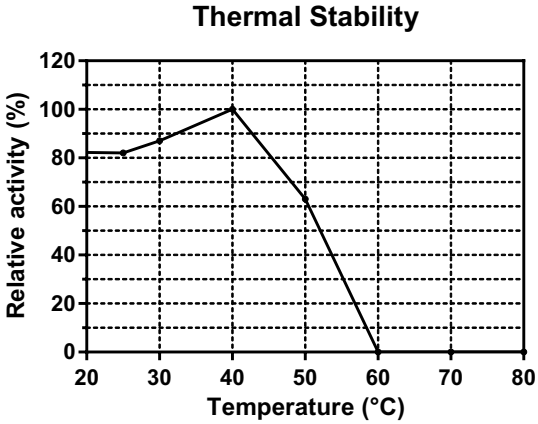
The enzyme is supplied as a solution containing 50% glycerol and 0.02% (w/v) sodium azide and should be stored below -10°C. For assay, this enzyme should be diluted in sodium phosphate buffer (100 mM), pH 7.5 containing 1 mg/mL BSA. **Swirl to mix the enzyme immediately prior to use.**

7. EXPERIMENTAL DATA:









8. REFERENCES:

McCleary, B.V., McKie, V.A., Draga, A., Rooney, E., Mangan, D. & Larkin, J. (2015). Hydrolysis of wheat flour arabinoxylan, acid-debranched wheat flour arabinoxylan and arabino-xylo-oligosaccharides by β-xylanase, α-L-arabinofuranosidase and β-xylosidase. *Carb. Res.,* 407, 79-96.

Rogowski, A., Briggs, J. A., Mortimer, J. C., Tryfona, T., Terrapon, N., Lowe, E. C., Basle, A., Morland, C., Day, A. M., Zheng, H., Rogers, T. E., Thompson, P., Hawkins, A. R., Yadav, M. P., Henrissat, B., Martens, E. C., Dupree, P., Gilbert, H. J. & Bolam, D. N. (2015). Glycan complexity dictates microbial resource allocation in the large intestine. *Nat. Commun.,* 6, 7481.