



α -L-ARABINOFURANOSIDASE from *C. thermocellum* (Lot 90701d)

Recombinant

E-ABFCT

11/19

(EC 3.2.1.55) α -L-arabinofuranosidase; α -L-arabinofuranoside arabinofuranohydrolase
CAZy Family: GH51

PROPERTIES

1. ELECTROPHORETIC PURITY

- Single band on SDS-gel electrophoresis (MW ~ 58,500)
- Single major band on isoelectric focusing (pI ~ 5.7)

2. SPECIFIC ACTIVITY

58 U/mg protein (on *p*-nitrophenyl- α -L-arabinofuranoside) at pH 5.5 and 40°C;
~155 U/mg protein at pH 5.5 and 60°C.

One Unit of α -L-arabinofuranosidase activity is defined as the amount of enzyme required to release one μ mole 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

Substrate	%
<i>p</i> -NP- α -L-arabinofuranoside	100
Debranched Arabinan	~ 1.0
Sugar Beet Arabinan	~ 0.4
Wheat Arabinoxylan	~ 0.05

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: 5.0 - 6.0 (*p*-NP- α -L-arabinofuranoside)
pH Stability: 5.0 - 9.0 (> 75% control activity after 24 hours at 4°C)
Temperature Optima: 60°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.