



α-L-RHAMNOSIDASE from a prokaryote (Lot 110501b)

Recombinant

E-RHAMS

07/13

(EC 3.2.1.40) alpha-L-rhamnoside rhamnohydrolase

CAZy: GH Family 78

PROPERTIES

1. ELECTROPHORETIC PURITY:

- Single band on SDS-gel electrophoresis (MW ~ 75,400)
- One major bands on isoelectric focusing (pI ~ 5.9)

2. SPECIFIC ACTIVITY:

190 U/mg protein at pH 6.5 and 50°C; 135 U/mg protein at pH 6.5 and 40°C.

One Unit of α-L-rhamnosidase activity is defined as the amount of enzyme required to release one μmole of of *p*-nitrophenol (*p*-NP) per minute from *p*-nitrophenyl-α-L-rhamnoside (5 mM) in sodium phosphate buffer (100 mM), pH 6.5 at 50°C.

3. OTHER ACTIVITIES (as a percentage of α-L-rhamnosidase activity):

Enzyme Measured	Substrate	Activity, %
α-L-Rhamnosidase	<i>p</i> -NP-α-L-rhamnoside	100
α-L-Arabinofuranosidase	<i>p</i> -NP-α-L-arabinofuranoside	< 0.001
α-L-Arabinopyranosidase	<i>p</i> -NP-α-L-arabinopyranoside	< 0.001
α-D-Galactosidase	<i>p</i> -NP-α-D-galactoside	< 0.001
α-D-Galactosidase	<i>p</i> -NP-β-D-galactoside	< 0.001
α-D-Glucosidase	<i>p</i> -NP-α-D-glucoside	< 0.001
β-D-Glucosidase	<i>p</i> -NP-β-D-glucoside	< 0.001
α-D-Mannosidase	<i>p</i> -NP-α-D-mannoside	< 0.001
β-D-Mannosidase	<i>p</i> -NP-β-D-mannoside	< 0.001
α-D-Xylosidase	<i>p</i> -NP-α-D-xyloside	< 0.001
β-D-Xylosidase	<i>p</i> -NP-β-D-xyloside	< 0.001

Action on *p*-NP-substrates was determined at a final substrate concentration of 2.5 mM in sodium phosphate buffer (100 mM), pH 6.5 at 40°C.

4. PHYSICOCHEMICAL PROPERTIES:

- pH Optima: 6.0 - 6.5
 pH Stability: 4.0 - 9.0 (> 75% control activity after 24 hours at 4°C)
 Temperature Optima: 50°C (10 min. reaction)
 Temperature Stability: up to 50°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 phosphate buffer (20 mM), pH 6.5 containing 1 mg/mL BSA. **Swirl to mix the enzyme immediately prior to use.**