



LICHENASE from *Bacillus subtilis* (Lot 150101b)

E-LICHN

10/18

(EC 3.2.1.73) licheninase, (1->3)-(1->4)-beta-D-glucan 4-glucanohydrolase

CAZy Family: GH16

CAS: 37288-51-0

PROPERTIES

1. ELECTROPHORETIC PURITY:

- Single band on SDS-gel electrophoresis (MW ~ 26,750)
- One major band on isoelectric focusing (pI ~9.0), two minor bands (pI ~8.6 and ~8.7)

2. SPECIFIC ACTIVITY:

250 U/mg protein (on barley β -glucan) at pH 6.5 and 40°C

One Unit of lichenase activity is defined as the amount of enzyme required to release one μ mole of glucose reducing-sugar equivalents per minute from barley β -glucan (10 mg/mL) in sodium phosphate buffer (100mM), pH 6.5 at 40°C

3. SPECIFICITY:

Hydrolysis of (1,4)- β -D-glucosidic linkages in β -D-glucans containing (1,3)- and (1,4)-bonds.

4. RELATIVE RATES OF HYDROLYSIS OF SUBSTRATES:

Substrate	%
Barley β -glucan	100
CM-Cellulose	<0.00006
pNP- β -glucoside	<0.00002
Blocked 4-nitrophenyl- α -maltoheptaoside (Ceralpha Reagent)	<0.000008
CM-Pachyman	<0.000002
p-Nitrophenyl β -D-maltoside (AMG Reagent)	<0.000001

Action on pNP-substrates and polysaccharides or oligosaccharides was determined at a final substrate concentration of 2.5 mM and 5 mg/mL, respectively, in sodium phosphate buffer (100 mM), pH 6.5 at 40°C.

5. PHYSICOCHEMICAL PROPERTIES:

Recommended conditions of use are at pH 6.0-6.5 and up to 60°C

pH Optima: 6.0

pH Stability: 3.0-9.0 (> 75% control activity after 24 h at 4°C)

Temperature Optima: 60°C (10 min reaction)

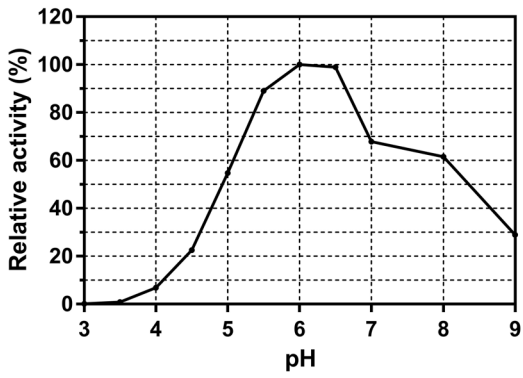
Temperature Stability: up to 60°C (> 75% control activity after 15 min incubation at temperature)

6. STORAGE CONDITIONS:

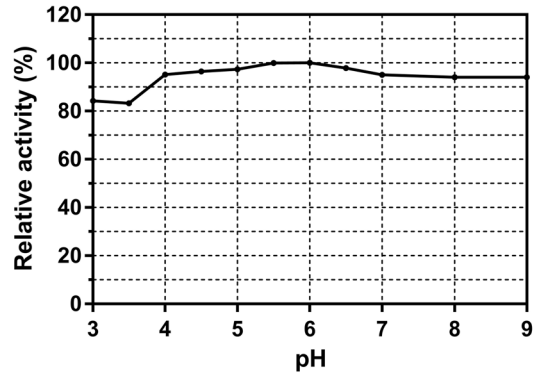
The enzyme is supplied as an ammonium sulphate suspension containing 0.02% (w/v) sodium azide and should be stored at 4°C. For assay, this enzyme should be diluted in sodium phosphate buffer (100 mM), pH 6.5 containing 1 mg/mL BSA. **Swirl to mix the enzyme immediately prior to use.**

7. EXPERIMENTAL DATA:

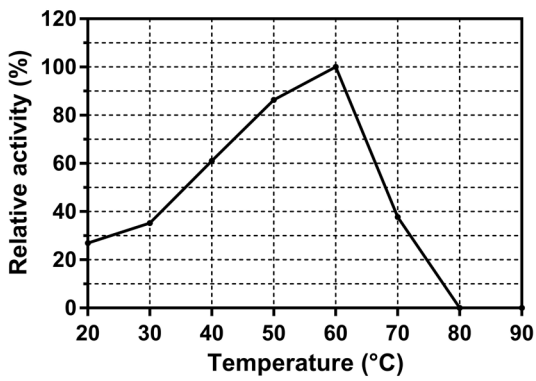
pH Optima



pH Stability



Thermal Optima



Thermal Stability

