



***endo*-1,4- β -GALACTANASE from *A. niger* (Lot 150901c)**

E-EGALN

(EC 3.2.1.89) arabinogalactan 4-beta-D-galactanohydrolase

CAZy Family: GH53

CAS: 58182-40-4

05/19

PROPERTIES

1. ELECTROPHORETIC PURITY:

- Single band on SDS-gel electrophoresis (MW ~48,000)

2. SPECIFIC ACTIVITY:

180 U/mg protein (on potato galactan) at pH 4.0 and 40°C

One Unit of galactanase activity is defined as the amount of enzyme required to release one μ mole of galactose reducing-sugar equivalents per minute from potato galactan (10 mg/mL) in sodium acetate buffer (100 mM), pH 4.0 at 40°C.

3. SPECIFICITY:

endo-hydrolysis of (1,4)- β -D-galactose linkages in (1,4)- β -galactans and type I arabinogalactans.

4. RELATIVE RATES OF HYDROLYSIS OF SUBSTRATES:

Substrate	%
Potato Galactan	100
Polygalacturonic Acid	0.428
CM-Cellulose	0.029
CM-Linear Arabinan	0.008
Birch-wood Xylan	0.0008
p-NP- β -Galactoside	0.0008
p-NP- α -L-Arabinofuranoside	0.0004

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 acetate buffer (100 mM), pH 4.0 at 40°C.

5. PHYSICOCHEMICAL PROPERTIES:

Recommended conditions of use are at pH 4.0-4.5 and up to 50°C

pH Optima: 4.0-4.5

pH Stability: 3.0-7.0 (> 75% control activity after 24 h at 4°C)

Temperature Optima: 50°C (10 min reaction)

Temperature Stability: < 50°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 acetate buffer (100 mM), pH 4.0 containing 1 mg/mL BSA. **Swirl to mix the enzyme immediately prior to use.**