



endo-1,4-β-GALACTANASE from *C. japonicus* (Lot 140701a)

Recombinant

E-GALCJ

07/19

(EC 3.2.1.89) Arabinogalactan 4-beta-D-galactanohydrolase
CAZy Family: GH53

PROPERTIES

1. ELECTROPHORETIC PURITY:

- Single band on SDS-gel electrophoresis (MW ~ 41,100)
- Single major band on isoelectric focusing (pI ~ 6.2)

2. SPECIFIC ACTIVITY:

102 U/mg protein (on potato galactan) at pH 8.0 and 40°C.

One Unit of galactanase activity is defined as the amount of enzyme required to release one μmole of galactose reducing-sugar equivalents per minute from potato galactan (10 mg/mL) in sodium phosphate buffer (100 mM), pH 8.0 at 40°C.

3. RELATIVE RATES OF HYDROLYSIS OF SUBSTRATES:

Substrate	%
Potato Galactan	100
CM-Cellulose 4M	< 0.001
Debranched Arabinan	< 0.001
Polygalacturonic Acid	< 0.001
Wheat Arabinoxylan	< 0.001
pNP-β-D-galactopyranoside	< 0.02
pNP-α-L-arabinofuranoside	< 0.004

Action on polysaccharide and pNP-substrates was determined at final substrate concentrations of 5 mg/mL and 5 mM, respectively, in sodium phosphate buffer (100 mM), pH 8.0 at 40°C.

4. PHYSICOCHEMICAL PROPERTIES:

pH Optima: 6.0-8.0
pH Stability: 4.0-9.0 (> 75% control activity after 24 h at 4°C)
Temperature Optima: 40°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 (100 mM), pH 8.0 containing 1 mg/mL BSA. **Swirl to mix the enzyme immediately prior to use.**