CELLULASE (*endo*-β-GLUCANASE) from *T. halotolerans* (Lot 151001a)

Recombinant - Alkali stable

E-CELTH **05/16**

(EC 3.2.1.4) 4-beta-D-glucan 4-glucanohydrolase
CAZy: GH Family 6
CAS: 9012-54-8

PROPERTIES

1. ELECTROPHORETIC PURITY:

- Single band on SDS-gel electrophoresis (MW ~ 44,000)
- One major band on isoelectric focusing (pI ~ 4.5)

2. SPECIFIC ACTIVITY:

26.8 U/mg protein (on CM-Cellulose 4M) at pH 8.5 and 60°C.
16.1 U/mg protein (on CM-Cellulose 4M) at pH 8.5 and 40°C.

One Unit of cellulase activity is defined as the amount of enzyme required to release one µmole of glucose reducing-sugar equivalents per minute from CM-Cellulose 4M (10 mg/mL) in Tris buffer (50 mM) pH 8.5.

3. RELATIVE RATES OF HYDROLYSIS OF SUBSTRATES:

Substrate	%
CM-Cellulose 4M	100
Barley β-Glucan	~ 135
Konjac Glucomannan	~1
Xyloglucan (Tamarind)	< 0.001
Carob Galactomannan (low viscosity)	< 0.0001
Starch (soluble)	< 0.0001
Beechwood Xylan	< 0.0001
Wheat Arabinoxylan	< 0.0001
*p*NP-β-D-glucoside	< 0.0001

Action on polysaccharide and *p*NP substrates was determined at final substrate concentrations of 5 mg/mL and 5 mM, respectively, in Tris Buffer (50 mM), pH 8.5 at 40°C.

4. PHYSICOCHEMICAL PROPERTIES:

pH Optima:	8.5
pH Stability:	3.0-11.0 (> 75% control activity after 24 h at 4°C)
Temperature Optima:	60°C (9 min reaction)
Temperature Stability:	up to 60°C

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 Tris buffer (50 mM) pH 8.5 containing 1 mg/mL BSA. **Swirl to mix the enzyme immediately prior to use.**

6. EXPERIMENTAL DATA: