CELLOBIOHYDROLASE II (microbial) (Lot 160203a)

Recombinant

E-CBHIIM **11/17**

(EC 3.2.1.91) cellulose 1,4-beta-cellobiosidase (non-reducing end); 4-beta-D-glucan cellobiohydrolase (non-reducing end)
CAZy Family: GH6
CAS: 37329-65-0

PROPERTIES

1. ELECTROPHORETIC PURITY:

- Single band on SDS-gel electrophoresis (MW ~ 42,300)
- Single major band on isoelectric focusing (pI ~ 4.7)

2. SPECIFIC ACTIVITY:

53 U/mg protein (on 1,4-β-D-cellopentaitol) at pH 5.5 and 40°C

One Unit of cellobiohydrolase activity is defined as the amount of enzyme required to release one µmole of glucose per minute from 1,4-β-D-cellopentaitol (10 mg/mL) in sodium acetate buffer (100 mM), pH 6.5 at 40°C

3. SPECIFICITY:

Hydrolysis of 1,4-beta-D-glucosidic linkages in cellulose and cellooligosaccharides (DP < 4), releasing cellobiose from the non-reducing ends of the chains.

4. RELATIVE RATES OF HYDROLYSIS OF SUBSTRATES:

Substrate	%
1,4-β-D-Cellopentaitol	100
1,4-β-D-Cellohexaitol	~ 102
1,4-β-D-Cellotetraitol	~ 1.2
1,4-β-D-Cellotriitol	< 0.0001
CM-Cellulose 4M	~ 0.45
Barley β-Glucan (low viscosity)	~ 0.9
CM-Pachyman	< 0.0001

Action on polysaccharides or oligosaccharides was determined at a final substrate concentration of 5 mg/mL, in sodium phosphate buffer (100 mM), pH 5.5 at 40°C.

5. PHYSICOCHEMICAL PROPERTIES:

Recommended conditions of use are at pH 5.0-6.0 and up to 40°C

pH Optima:	5.5
pH Stability:	5.0-8.0 (> 75% control activity after 24 h at 4°C)
Temperature Optima:	60°C (9 min reaction)
Temperature Stability:	up to 30°C (> 75% control activity after 15 min incubation at temperature)

6. STORAGE CONDITIONS:

The enzyme is supplied as a solution containing 50% glycerol and should be stored at -20°C. For assay, this enzyme should be diluted in sodium acetate buffer (100 mM), pH 5.5 containing 1 mg/mL BSA. **Swirl to mix the enzyme immediately prior to use.**

7. EXPERIMENTAL DATA: