XANTHAN LYASE from *Bacillus sp.* (Lot 110201b)

Recombinant

E-XANLB **04/14**

(EC 4.2.2.12) xanthan lyase
CAZy: PL Family 8

PROPERTIES

1. ELECTROPHORETIC PURITY:

- Single band on SDS-gel electrophoresis (MW ~ 81,600)
- Single major band on isoelectric focusing (pI ~ 5.4)

2. SPECIFIC ACTIVITY:

3039 U/mg protein (on xanthan gum) at pH 6.0 and 40°C.

One Unit of xanthan lyase activity is defined as the amount of enzyme required to produce an increase in absorbance of 1.0 per minute at 235 nm and 40°C in the following reaction conditions:

HEPES buffer (100 mM) pH 6.0	0.8 mL
Xanthan Gum (5 mg/mL)	0.2 mL
Xanthan Lyase	0.1 mL

3. SPECIFICITY:

Beta-elimination cleavage of the terminal β-D-mannosyl-β-D-1,4-glucuronosyl linkage of the side-chain of xanthan.

4. PHYSICOCHEMICAL PROPERTIES:

pH Optima:	6.0
pH Stability:	4.0 - 9.0 (> 75% control activity after 24 hours at 4°C)
Temperature Optima:	40°C (10 min. reaction)
Temperature Stability:	up to 40°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 HEPES buffer (100 mM), pH 6.0 containing 0.5 mg/mL BSA. **Swirl to mix the enzyme immediately prior to use.**

6. REFERENCES:

Hashimoto, W., Miki, H., Tsuchiya, N., Nankai, H. & Murata, K. (1998). Xanthan lyase of *Bacillus* sp. Strain GL1 liberates pyruvylated mannose from xanthan side chains. *Appl. Environ. Microbiol.* 1774, 3765–3768.

Maruyama, Y., Hashimoto, W., Mikami, B. & Murata, K. (2005). Crystal structure of *Bacillus* sp. GL1 xanthan lyase complexed with a substrate: Insights into the enzyme reaction mechanism. *J. Mol. Biol.* 350, 974–986.