**ALGINATE LYASE from Sphingomonas sp. (Lot 110201c)**

**Recombinant**

E-ALGLS 02/17

(EC 4.2.2.3) poly(beta-D-mannuronate) lyase

CAZy Family: PL7

**PROPERTIES**

1. **ELECTROPHORETIC PURITY:**
   - Single band on SDS-gel electrophoresis (MW ~ 39,600)
   - Single major band on isoelectric focusing (pI ~ 5.6)

2. **SPECIFIC ACTIVITY:**
   125 U/mg protein (on sodium alginate) at pH 7.2 and 40°C.

   **One Unit** of alginate 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:

   - Tris.HCl buffer (100 mM) pH 7.2 0.8 mL
   - Sodium Alginate (10 mg/mL) 0.2 mL
   - Alginate Lyase 0.1 mL

3. **SPECIFICITY:**
   Endo-acting β-elimination cleavage of the polysaccharide, alginate.

4. **PHYSICOCHEMICAL PROPERTIES:**

   - pH Optima: 7.2
   - 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 TRIS.HCl buffer (100 mM), pH 7.2 containing 1 mg/mL BSA. **Swirl to mix the enzyme immediately prior to use.**

6. **REFERENCES:**
