

Alginate lyase 5A, *Sphingomonas* sp.

SAlg5A (PL5)

Catalogue number	Presentation
CZ05401	1 mg
CZ05402	3 x 1 mg

Description

Alginate lyase 5A (SAlg5A), assigned the E.C. number 4.2.2.3, is a derivative of *Sphingomonas* sp.. It is an enzyme that catalysis the degradation of alginate by a β -elimination mechanism. The recombinant SAlg5A, purified from *Escherichia coli*, is a single-domain Pectate Lyase family 5 (PL5) enzyme (see more details at www.cazy.org). The protein is supplied in a solution containing 35 mM NaHepes buffer (pH 7.5), 750 mM NaCl, 200 mM Imidazole, 3.5 mM CaCl₂, and 25% (v/v) glycerol, at a concentration of 1 mg/mL. Bulk quantities of this product can be made available upon request. To place an order, simply visit our website. We offer fast and secure shipping worldwide.

Electrophoretic Purity

The molecular integrity and purity of SAlg5A (PL5) were evaluated using sodium dodecyl sulfate-polyacrylamide gel electrophoresis (SDS-PAGE), followed by BlueSafe staining (MB15201) (Figure 1).

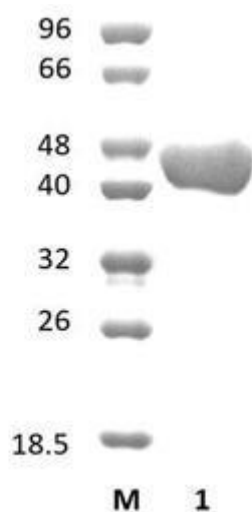


Figure 1. SDS-PAGE analysis of SAlg5A (PL5) was conducted in (Lane 1), employing a 14% polyacrylamide gel. The enzyme exhibits a band corresponding to a molecular weight of approximately 44,19 kDa. Lane M contains a Protein Marker for reference.

Storage temperature

The protein should be stored at -30°C to -15°C in a constant temperature freezer. The protein will remain stable till the expiry date if stored as specified.

Substrate specificity

SAlg5A (PL5) participates in the eliminative cleavage of polyguluronate and polymannuronate.

Temperature and pH optima

The pH optimum for enzymatic activity is 8 while temperature optimum is 30 °C.

Enzyme activity

The substrate specificity and kinetic properties of SAlg5A (PL5) are detailed in the referenced publication provided below. To perform enzyme assays and determine specific activity values, adhere to the methodology outlined in the cited paper(s).

Reference

Yoon *et al.* (2000) *Protein Expr Purif.* 19(1):84-90.

Yamasaki *et al.* (2005) *Acta Crystallogr Sect F Struct Biol Cryst Commun.* 61(Pt 3): 288–290.

Coelho *et al.* (2019) *Sci Rep.* 9(1):5382.

Customer Support

Our dedicated customer support team is always ready to assist you with any questions or technical issues you may have. Reach us via email at info@nzytech.com.

Quality control assay

Protein purity is determined to be $\geq 90\%$, as assessed by SDS-PAGE and subsequent BlueSafe staining (MB15201).

For life science research only. Not for use in diagnostic procedures.

NZYtech Lda. Estrada do Paço do Lumiar, Campus do Lumiar - Edifício E, R/C, 1649-038 Lisboa, Portugal Tel.: +351.213643514 Fax:
+351.217151168 www.nzytech.com