

## Heparin-sulfate lyase 12B, *Bacteroides thetaiotaomicron*

### BtHep12B (PL12)

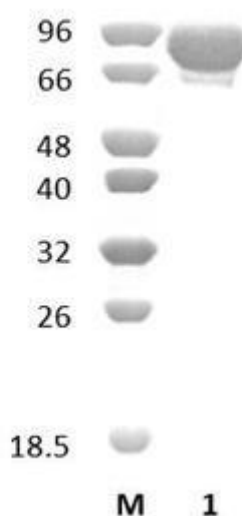
Catalogue number	Presentation
CZ07661	1 mg
CZ07662	3 x 1 mg

#### Description

Heparin-sulfate lyase 12B (*BtHep12B*), assigned the E.C. number 4.2.2.8, is a derivative of *Bacteroides thetaiotaomicron*. It is an enzyme that acts on linkages between acetyl-glucosamine and uronate of heparan sulfate. The recombinant *BtHep12B*, purified from *Escherichia coli*, is a single-domain Pectate Lyase family 12 (PL12) enzyme (see more details at [www.cazy.org](http://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 CaCl<sub>2</sub>, 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 *BtHep12B* (PL12) were evaluated using sodium dodecyl sulfate-polyacrylamide gel electrophoresis (SDS-PAGE), followed by BlueSafe staining (MB15201) (Figure 1).



**Figure 1.** SDS-PAGE analysis of *BtHep12B* (PL12) was conducted in (Lane 1), employing a 14% polyacrylamide gel. The enzyme exhibits a band corresponding to a molecular weight of approximately 77,59 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

*BtHep12B* (PL12) participates in the eliminative cleavage of low or unsulfated regions of heparan sulfate.

#### Temperature and pH optima

The enzyme exhibits optimal activity within a pH range of 6.0-7.5 and at a temperature of 25-37°C. Maximal enzymatic activity is achieved at pH 6.5 and a consistent temperature of 37°C.

## Enzyme activity

The substrate specificity and kinetic properties of BtHep12B (PL12) 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

Cartmell *et al.* (2017) *Proc Natl Acad Sci U S A.* 114(27):7037-7042.

Ulaganathan *et al.* (2017) *Glycobiology.* 27(2):176-187.

## 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](mailto: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](http://www.nzytech.com)