

Product Information

Heparinase III from *Flavobacterium heparinum*

Lyophilized powder stabilized with approx. 25% (w/w) bovine serum albumin, ≥ 30 units/mg protein (enzyme + BSA)

H8891

Product Description

CAS Registry Number: 37290-86-1

Enzyme Commission (EC) Number: 4.2.2.8

Synonyms: Heparin Lyase III, Heparitinase I, Heparitinase from *Flavobacterium heparinum*

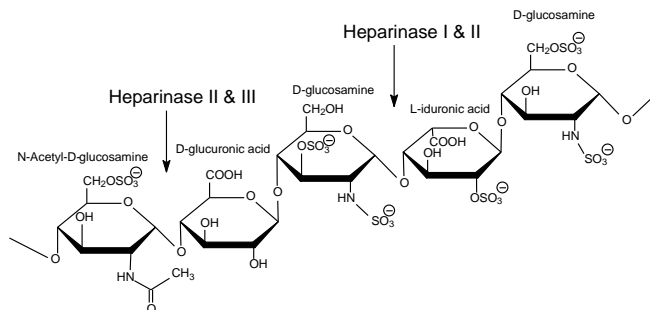
Storage Temperature: $-20\text{ }^{\circ}\text{C}$

pI:¹ 7.9

Optimal pH: 7.0

Molecular weight:² 73,540 Da

Heparinase is an enzyme used for degradation of various heparin substrates. The three forms of heparinase (I, II, and III, Cat. Nos. H2519, H6512, and H8891, respectively) have varying substrate specificities.³⁻⁵ Heparinase III cleaves at the 1 \rightarrow 4 linkages between hexosamine and glucuronic acid residues in heparan sulfate, to yield mainly disaccharides. The enzyme is not active towards heparin or low molecular weight heparins.



Various metal ions have been shown to activate and inhibit heparinase:⁶⁻⁹

- Ca^{2+} has been shown to activate heparinase.
- Cu^{2+} , Hg^{2+} , and Zn^{2+} appear to inhibit heparinase.

Several theses¹⁰⁻¹¹ and dissertations¹²⁻²⁰ have cited use of product H8891 in their research protocols.

Unit definitions

- The definition of an International Unit (IU) of heparinase is as follows: one IU will form 1 μmole of unsaturated uronic acid per minute.
- Sigma units are defined as the amount of enzyme that will form 0.1 μmole of unsaturated uronic acid per hour.
- Based on this information, one IU is equal to 600 Sigma units, despite the slight difference in assay temperatures.

Precautions and Disclaimer

This product is for R&D use only. Not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

Store the product at $-20\text{ }^{\circ}\text{C}$.

Enzyme solutions of heparinase III at pH 6-7 remain active for a week at $-20\text{ }^{\circ}\text{C}$.

Preparation Instructions

This enzyme can be reconstituted to a concentration of 75-100 Sigma units/mL in 20 mM Tris-HCl, pH 7.5, containing 0.1 mg/mL BSA and 4 mM CaCl_2 .

References

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