

Data Sheet

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Heparinase III**Research Grade**AMS.50-012-001
AMS.50-0120.1 IU (in 10uL aliquot)
0.5 IU (in 50uL aliquot)**Synonyms**

Heparin sulfate eliminase; heparitinase I

Source*Flavobacterium heparinum* (recombinant)**EC Number**

4.2.2.8

CAS Number

37290-86-1

Catalyzed Reaction

The enzyme cleaves selectively, via an elimination mechanism, sulfated polysaccharide chains containing 1-4 linkages between hexosamines and glucuronic acid residues. The reaction yields oligosaccharide products (mainly disaccharides) containing unsaturated uronic acids which can be detected by UV spectroscopy at 232 nm. The enzyme is active only towards heparan sulfate and does not cleave heparin or low molecular weight heparins.

Substrate Specificity

Heparan sulfate.

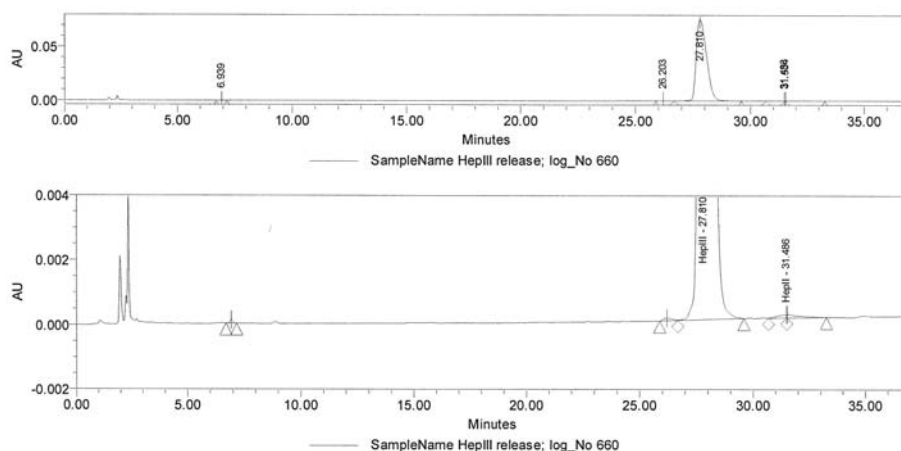
Heparinase III cleaves heparan sulfate exclusively, and does not cleave unfractionated heparin or low molecular weight heparins.

Properties

- Molecular weight: 73,202 Da
- Isoelectric point: 9.6 – 9.9
- pH optimum for activity: 7 – 8
- pH range for activity: 5.5 – 9
- Optimal temperature range: 20 °C – 37 °C

Purity

≥95 % by reversed phase HPLC analysis.

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UK & Rest of the World
184 Park Drive, Milton Park
Abingdon OX14 4SE, UK
T: +44 (0)1235 828 200
F: +44 (0) 1235 820 482



North America
1035 Cambridge Street,
Cambridge, MA 02141
T: +1 (617) 945-5033 or
T: +1 (800) 987-0985
F: +1 (617) 945-8218



Germany
Bockenheimer Landstr. 17/19
60325 Frankfurt/Main
T: +49 (0) 69 779099
F: +49 (0) 69 13376880



Switzerland
Centro Nord-Sud 2E
CH-6934 Bioggio-Lugano
T: +41(0) 91 604 55 22
F: +41(0) 91 605 17 85

Specific Activity

>45 IU/mg.

One international unit (IU) is defined as the amount of enzyme that will liberate 1.0 μ mole unsaturated oligosaccharides from heparan sulfate per minute at 30 °C and pH 7.5.

Stability

- PN 50-012 (vial of 0.5 IU): Expiration is 30 months from manufacturing date frozen at -70 °C in aqueous buffer containing Sodium Chloride, Sodium Phosphate and Sucrose 5%.
- PN 50-012-001 (vial of 0.1 IU): Expiration is 30 months from manufacturing date frozen at -70 °C in aqueous buffer containing Sodium Chloride, Sodium Phosphate and Sucrose 5%.

Applications

- As a research reagent (glycosaminoglycan degradation).
- For the preparation of disaccharides of heparan sulfate and the preparation of oligosaccharide libraries.

Availability

A proprietary expression system for *F. heparinum* and the fermentation and isolation processes allow the production of large quantities of high purity product.

References

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UK & Rest of the World
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F: +44 (0) 1235 820 482



North America
1035 Cambridge Street,
Cambridge, MA 02141
T: +1 (617) 945-5033 or
T: +1 (800) 987-0985
F: +1 (617) 945-8218



Germany
Bockenheimer Landstr. 17/19
60325 Frankfurt/Main
T: +49 (0) 69 779099
F: +49 (0) 69 13376880



Switzerland
Centro Nord-Sud 2E
CH-6934 Bioggio-Lugano
T: +41(0) 91 604 55 22
F: +41(0) 91 605 17 85

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T: +41(0) 91 604 55 22
F: +41(0) 91 605 17 85