

Heparinase I Lyophilized

PN 60-010
60-012
60-014

Synonyms	Heparinase; heparin lyase; heparin eliminase
Source	<i>Flavobacterium heparinum</i> (recombinant)
EC Number	4.2.2.7
CAS Number	9025-39-2
Catalyzed Reaction	The enzyme cleaves selectively, via an elimination mechanism, highly sulfated polysaccharide chains containing 1-4 linkages between hexosamines and O-sulfated iduronic 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 also cleaves the antithrombin III binding pentasaccharide domain in the heparin molecule.
Substrate Specificity	Heparin; heparan sulfate (specific activity with heparin is approx. 3 times higher than with heparan sulfate).
Properties	<ul style="list-style-type: none">• Lyophilized powder• Molecular weight: 42,508 Da• Isoelectric point: 9.3 – 9.5• pH optimum for activity: 6.5 – 7.5• pH range for activity: 4 – 9• Optimal testing temperature range: 20 °C – 37°C• Optimal storage temperature: 5 +/- 3°C
Purity	Made from Heparinase I (PN 50-009) ≥95 % by reversed phase HPLC analysis.
Enzymatic Activity	One international unit (IU) is defined as the amount of enzyme that will liberate 1.0 μmole unsaturated oligosaccharides from porcine mucosal heparin per minute at 30°C.
Reconstitution	Add 250 μL of water to reconstitute to its original formulation
Stability	Expiration is 24 months from manufacturing date when stored at 5 +/- 3°C.
Applications	<ul style="list-style-type: none">• For the in-vitro neutralization of heparin and low molecular weight heparin in blood and plasma samples before analysis.• For the preparation of low molecular weight heparins from unfractionated heparin.• As a research reagent (glycosaminoglycan degradation).• For the preparation of disaccharides of heparin and the preparation of oligosaccharide libraries.
Availability	A proprietary expression system for <i>F. heparinum</i> and the fermentation and isolation processes developed by IBEX Pharmaceuticals allow the production of large quantities of high purity product.

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References

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