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Product Information

Chondroitinase AC

from *Flavobacterium heparinum*

Product Number **C 2780**

Storage Temperature $-0\text{ }^{\circ}\text{C}$

EC 4.2.2.5

Synonym: Chondroitin AC Lyase

Product Description

Chondroitinase AC from *Flavobacterium heparinum* is an eliminase that degrades chondroitin sulfates A and C, but not chondroitin sulfate B. The enzyme cleaves, via an elimination mechanism, sulfated and non-sulfated polysaccharide chains containing (1-4) linkages between hexosamines and glucuronic acid residues. The reaction yields oligosaccharide products, mainly disaccharides, containing unsaturated uronic acids that can be detected by UV spectroscopy at 232 nm.

The enzyme shows approximately equal activity with chondroitin sulfates A and C, while the activity observed with chondroitin sulfate B is approximately 7% of this value. This activity is most likely due to the presence of chondroitin sulfates A and C (10%) in the chondroitin sulfate B.

The product is supplied as a lyophilized powder with approximately 15% protein content with the balance being potassium phosphate salts. The majority of the protein content (90%) is bovine serum albumin added as a stabilizer.

Specific Activity: 0.5 – 1.5 units/mg solid using chondroitin sulfate A as substrate.

Unit definition: One unit will cause a ΔA_{232} of 1.0 per minute due to the release of unsaturated disaccharides from chondroitin sulfate A at pH 7.3 at $37\text{ }^{\circ}\text{C}$.

Precautions and Disclaimer

This product is for laboratory research use only. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Preparation Instructions

Reconstitute the product in 20 mM phosphate buffer, pH 7.0. Subsequent dilutions can be made with a 0.01% aqueous bovine serum albumin solution.

Storage/Stability

It is recommended to store the lyophilized product desiccated at $-0\text{ }^{\circ}\text{C}$ and it is stable for at least 2 years.

References

1. Yamagata, T., et al., *J. Biol. Chem.*, **243**, 1523-1535 (1968).
2. Hiyama, K., and Okada, S., *J. Biol. Chem.*, **250**, 1824 (1975).
3. Tkalec, A.L., et al., *Appl. Environ. Microbiol.*, **66(1)**, 29-35 (2000).

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