**PRODUCT DATA SHEET**

**Product Name:** Chondroitinase AC-1 from *Flavobacterium heparinum*

**Synonym:** Chondroitin sulphate AC lyase, Chondroitin AC lyase

**Product Number:** GE-C0001

**Enzyme Commission (E.C.) Number:** 4.2.2.5

**CAS Number:** 9047-57-8

**Molecular Weight:** 74.0 kDa (SDS PAGE)

**Storage Temperature:** Store frozen at -20 or below upon receipt. Avoid repeated freeze-thawing.

**pI:** 8.85

**Description:** The enzyme is stabilised with 0.2 to 0.4% BSA (Sigma A4378), 0.22 μm sterile-filtered and dispensed into sterile vials. To preserve high activity, the enzyme is stored frozen at -60 °C and supplied world-wide as a frozen solution. It is shipped on dry ice (approximately 0.5 kg) contained in a stainless steel Thermos flask, giving up to 4 days of transit time.

**Substrates:** Chondroitin, chondroitin sulphates A and C, and hyaluronic acid.

**Specificity:** Chondroitinase AC-1 cleaves sulphated and non-sulphated polysaccharides containing (1-4) linkages between glucuronic acid and hexosamine residues. The elimination reaction yields oligosaccharides (mostly disaccharides) containing unsaturated uronic acids, detectable by UV spectroscopy (232 nm). The enzyme degrades chondroitin sulphates A and C but is not active on dermatan sulphate (chondroitin sulphate B).

**Applications:** Chondroitinase AC-1 has been used for the large-scale preparation of glycosaminoglycan fractions during the study of structural and sequence motifs in dermatan sulfate.

The enzyme has also been used to cleave chondroitin sulphate that is known to interfere with DNA transcription in PCR, to remove interfering β-glucuronidase and protease activities, to hydrolyse chondroitin sulphate prior to HPLC analysis, and in the reverse transcription of RNA.

**Unit Definition:** One unit will form 0.1 micromole of unsaturated uronic acid per hour at pH 7.0 at 25 °C using chondroitin sulphate A as substrate.

**Safety Information:** We are not aware of any toxicity associated with this product. In common with good laboratory practice the material should only be handled by qualified personnel trained in laboratory procedures and familiar with potential hazards. For in vitro research use only. Not for human or drug use.

**Warranties and Liabilities:** GrampEnz warrants that its products conform to the descriptions of such products as presented in its list of products. Should the product fail for reasons other
than through misuse GrampEnz will, at its option, replace free of charge or refund the purchase price. This warranty is exclusive, and GrampEnz makes no other warranty, expressed or implied, including any implied warranty of merchantability or fitness for any particular purpose. GrampEnz shall not be liable for any incidental, consequential or contingent damages.

References: