
Product Data Sheet

Product Name: D-Glucuronic acid

Cat. No.: GC38249

Chemical Properties

Cas. No. 6556-12-3

SMILES O=C[C@@H]([C@H]([C@@H]([C@@H](C(O)=O)O)O)O)OFormula $C_6H_{10}O_7$ M.Wt 194.14

Solubility DMSO: slightly soluble, PBS (pH 7.2): 10 mg/ml Storage Store at -20°C

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT, or blue ice upon request.

Structure **Background**

D-Glucuronic acid is a metabolite of glucose.^{1,2} It is formed from glucose in a multi-step process in which uridine diphosphate glucose is dehydrogenated to uridine diphosphate glucuronic acid, from which D-glucuronic acid can be transferred to a receptor to form glucuronides, further metabolized to ascorbic acid or xylulose, or excreted.¹ D-Glucuronic acid is a component of proteoglycans, including heparan sulfate and chondroitin sulfate.³ Levels of D-glucuronic acid are increased in fibroblasts isolated from patients with infantile free sialic acid storage disease (ISSD) or Salla disease, lysosomal storage disorders characterized by truncal ataxia and psychomotor retardation and hepatosplenomegaly and impaired growth, respectively.⁴

1. Miettinen, T.A., and Leskinen, E. Enzyme levels of glucuronic acid metabolism in the liver, kidney and intestine of normal and fasted rats *Biochem. Pharmacol.* 12(6):565-575(1963)
 2. Dutton, G.J., and Storey, I.D.E. Glucuronide-forming enzymes: UDPglucuronic acid + R·OH → UDP + R·O· glucuronic acid *Methods in Enzymology* 51:159-164(1962)
 3. Kwok, J.C.F., Warren, P., and Fawcett, J.W. Chondroitin sulfate: A key molecule in the brain matrix *Int. J. Biochem. Cell Biol.* 44(4):582-586(2012)
 4. Blom, H.J., Andersson, H.C.,

Caution: Product has not been fully validated for medical applications. For research use only.

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Seppala, R., et al. Defective glucuronic acid transport from lysosomes of infantile free sialic acid storage disease fibroblasts *Biochem. J.* 268(3)621-625(1990)

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