Product Data Sheet

Product Name: Heparin Lithium salt
Cat. No.: GC36215

Chemical Properties

Cas. No.	9045-22-1		
SMILES	O[C@H]1[C@H](O[C@H]2[C@H](OS(O)(=O)=O)[C@@H](O)[C@H](OC)[C@H](C(O)=O)O2)[C@@H](COS(O)(=O)=O)O[C@H](OC)[C@@H]1NS(O)(=O)=O.[n].[.xLi]		
Formula	$(C_{14}H_{25}NO_{20}S_3)n.xLi$	M.Wt	
Solubility	Water: 125 mg/mL	Storage	4°C, protect from light
General tips	For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20℃ 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	Heparin Lithium salt		

Background

Heparin Lithium salt is an anticoagulant which binds reversibly to antithrombin III (ATIII) (50-400 U/Kg). Antithrombin III[1]

Heparin is a potent anticoagulant drug based on its ability to accelerate the rate at which antithrombin inhibits serine proteases in the blood coagulation cascade. Heparin interactes most tightly with peptides containing a complementary binding site of high positive charge density. Heparin resembles DNA as both are highly charged linear polymers that behave as polyelectrolytes. Heparin is believed to function as an anticoagulant primarily through its interaction with AT III by enhancing AT-III-mediated inhibition of blood coagulation factors, including thrombin and factor Xa. Heparin binds to AT III and thrombin in a ternary complex, increasing the bimolecular rate constant for the inhibition of thrombin by a factor of 2000. Heparin is principally located in the granules of tissue mast cells that are closely associated with the immune response. Heparin makes numerous contacts with both FGF-2 and FGFR-1 stabilizing FGF-FGFR binding. Heparin also makes contacts with the FGFR-1 of the adjacent FGF-FGFR

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complex, thus seeming to promote FGFR dimerization[1].

[1]. Capila I, et al. Heparin-protein interactions. Angew Chem Int Ed Engl. 2002 Feb 1;41(3):391-412.

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