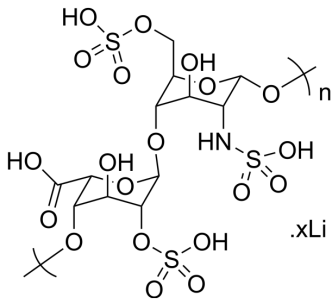
Heparin Lithium salt

Cat. No.:	HY-17567B
CAS No.:	9045-22-1
Molecular Formula:	$(C_{14}H_{25}NO_{20}S_3)n.xLi$
Target:	Autophagy; Thrombin; Bacterial
Pathway:	Autophagy; Metabolic Enzyme/Protease; Anti-infection
Storage:	4°C, sealed storage, away from moisture and light * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture and light)



SOLVENT & SOLUBILITY

In Vitro	H_2O : 100 mg/mL (Need ultrasonic) DMSO : < 1 mg/mL (ultrasonic;warming;heat to 60°C) (insoluble or slightly soluble)
In Vivo	1. Add each solvent one by one: PBS Solubility: 100 mg/mL (Infinity mM); Clear solution; Need ultrasonic

BIOLOGICAL ACTIVITY

Description	Heparin Lithium salt is an anticoagulant which binds reversibly to antithrombin III (ATIII). Heparin Lithium salt significantly inhibits exosome-cell interactions.
IC_{50} & Target	Antithrombin III[1]
In Vitro	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 complex, thus seeming to promote FGFR dimerization[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Nat Commun. 2024 Feb 7;15(1):1150.
- Research Square Preprint. 2023 May 30.

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REFERENCES

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

[2]. Anurag Purushothaman, et al. Fibronectin on the Surface of Myeloma Cell-derived Exosomes Mediates Exosome-Cell Interactions. J Biol Chem. 2016 Jan 22;291(4):1652-63.

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