Protamine sulfate

Cat. No.: HY-107911

CAS No.: 9009-65-8

Target: Thrombin

Pathway: Metabolic Enzyme/Protease

Storage: -20°C, sealed storage, away from moisture
* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)

Protamine sulfate

SOLVENT & SOLUBILITY

In Vitro	H_2O : 50 mg/mL (Need ultrasonic)
In Vivo	1. Add each solvent one by one: PBS Solubility: 33.33 mg/mL (Infinity mM); Clear solution; Need ultrasonic

BIOLOGICAL ACTIVITY

Description	Protamine sulfate, polycationic peptide and a antiheparin agent, could neutralize the anticoagulant action of heparin and enhances lipid-mediated gene transfer[1][2][3].
In Vitro	Protamine sulfate has an inhibitory effect on thrombin in the conversion of fibrinogen to fibrin, and that this inhibition is concentration dependent, partial, and reversible[3]. Protamine sulfate is a 5-kDa cationic polypeptide derived from salmon sperm that can bind negatively charged unfractionated heparin (UFH). Protamine sulfate down-regulates thrombin generation by inhibiting factor V activation[4]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Protamine sulfate can be used in animal modeling to construct animal cystitis models. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Ahmed Kouta, et al. Protamine Sulfate Neutralization Profile of Various Dosages of Bovine, Ovine and Porcine UFHs and Their Depolymerized Derivatives in Non-Human Primates. Clin Appl Thromb Hemost. Jan-Dec 2021;27:10760296211005544.

[2]. F L Sorgi, et al. Protamine sulfate enhances lipid-mediated gene transfer. Gene Ther. 1997 Sep;4(9):961-8.

[3]. R J Cobel-Geard, et al. Interaction of protamine sulfate with thrombin. Am J Hematol. 1983 May;14(3):227-33.

[4]. Fionnuala Ni Ainle, et al. Protamine sulfate down-regulates thrombin generation by inhibiting factor V activation. Blood. 2009 Aug 20;114(8):1658-65.

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

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