

## Protamine sulfate

Cat. No.:	HY-107911		
CAS No.:	9009-65-8		
Target:	Thrombin		
Pathway:	Metabolic Enzyme/Protease		
Storage:	Powder	-80°C	2 years
		-20°C	1 year
	In solvent	-80°C	6 months
		-20°C	1 month

## Protamine sulfate

### SOLVENT & SOLUBILITY

In Vitro	H <sub>2</sub> O : 50 mg/mL (Need ultrasonic)
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### BIOLOGICAL ACTIVITY

Description	Protamine sulfate, polycationic peptide and a antiheparin agent, could neutralize the anticoagulant action of heparin and enhances lipid-mediated gene transfer <sup>[1][2][3]</sup> .
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 <sup>[3]</sup> . 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 <sup>[4]</sup> . 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.

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

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