Sugammadex sodium

Cat. No.: HY-B0079

CAS No.: 343306-79-6

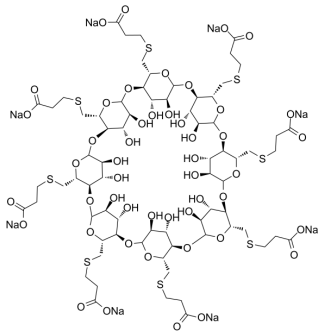
Molecular Formula: $C_{72}H_{104}Na_8O_{48}S_8$

Molecular Weight: 2178.01

Target: Others

Pathway: Others

Storage: 4°C, sealed storage, away from moisture
* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro

H_2O : 100 mg/mL (45.91 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	0.4591 mL	2.2957 mL	4.5913 mL
	5 mM	0.0918 mL	0.4591 mL	0.9183 mL
	10 mM	0.0459 mL	0.2296 mL	0.4591 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: PBS
Solubility: 100 mg/mL (45.91 mM); Clear solution; Need ultrasonic

BIOLOGICAL ACTIVITY

Description

Sugammadex sodium is a synthetic γ-cyclodextrin derivative, and acts as a reversal agent for neuromuscular block. Sugammadex sodium shows nephroprotective effect in ischemia-reperfusion injury[1][2].

In Vivo

Sugammadex (100 mg/kg, IV, once) has a nephroprotective effect when given at the beginning of reperfusion after one hour of ischemic condition on rats[2].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

PROTOCOL

Animal Administration [1]

Female rhesus monkeys with a body weight of 5.2-7.1 kg are sedated with 10 mg/kg ketamine intramuscularly. Two intravenous lines are placed: one for anesthetization, including rocuronium, the other for test drug administration. This is followed by intravenous injection of 25 mg/kg pentobarbitone sodium and a subsequent continuous infusion of 5-10

mg/kg/h. The monkeys are intubated endotracheally, and the lungs are ventilated with a mixture of oxygen and nitrous oxide (volume ratio of 2:3). Four animals are each studied on three different occasions. The occasions differed by the administration of either saline or a low (1.0 mg/kg) or high (2.5 mg/kg) dose of sugammadex. Between the experiments, the monkeys recover for at least 6 weeks. Heart rate and oxygen saturation are determined at the ear with a pulse oximeter. Blood pressure is determined with a cuff placed around the tail. Body temperature is measured by a rectal probe and kept at 37°C-38°C.

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Tercan M, Yılmaz İnal F, Seneldir H, Kocoglu H. Nephroprotective Efficacy of Sugammadex in Ischemia-Reperfusion Injury: An Experimental Study in a Rat Model. Cureus. 2021 Jun 17;13(6):e15726.

[2]. de Boer HD, et al. Reversal of profound rocuronium neuromuscular blockade by sugammadex in anesthetized rhesus monkeys. Anesthesiology. 2006 Apr;104(4):718-23.

[3]. de Boer HD, et al. Sugammadex, a new reversal agent for neuromuscular block induced by rocuronium in the anaesthetized Rhesus monkey. Br J Anaesth. 2006 Apr;96(4):473-9. Epub 2006 Feb 7.

[4]. de Boer HD, et al. Time course of action of sugammadex (Org 25969) on rocuronium-induced block in the Rhesus monkey, using a simple model of equilibration of complex formation. Br J Anaesth. 2006 Nov;97(5):681-6. Epub 2006 Oct 3.

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