

Product Data Sheet

Product Name: Sugammadex sodium

Cat. No.: GC19340

Chemical Properties

Cas. No. 343306-79-6

SMILES N/A

Formula $C_{72}H_{104}Na_8O_{48}S_8$ M.Wt 2178.01

Solubility Water : ≥ 34 mg/mL (15.61 mM) Storage Store at -20°C

General tips For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.

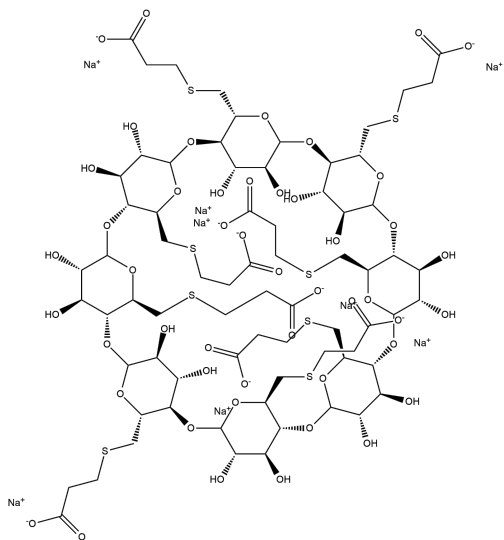
Caution: Product has not been fully validated for medical applications. For research use only.

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Structure



Protocol

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**Animal
experiment:**

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 anesthetic administration, 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.

References:

- [1]. de Boer HD, et al. Reversal of profound rocuronium neuromuscular blockade by sugammadex in anesthetized rhesus monkeys. *Anesthesiology*. 2006 Apr;104(4):718-23.
- [2]. 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.
- [3]. 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.

Background

Sugammadex sodium is a synthetic γ -cyclodextrin derivative, and acts as a new reversal agent for neuromuscular block.

Injection of sugammadex has no significant effects on blood pressure or heart rate. After injection of the high rocuronium dose, the 90% recovery of the train-of-four ratio takes 28 min (SD 7 min) after saline, 26 min (SD 9.5 min) after 1 mg/kg sugammadex, and 8 min (SD 3.6 min) after 2.5 mg/kg

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sugammadex[1]. Sugammadex causes a rapid and complete reversal of rocuronium-induced neuromuscular block. The recovery time to train of four ratio=0.9 after spontaneous recovery is 14.4 min (SD=3.4 min; n=14). This is reduced significantly to 3.7 min (SD=3.3 min; n=4) with sugammadex 0.5 mg/kg and to 1.9 min (SD=1.0 min; n=4) with sugammadex 1.0 mg/kg[2]. The estimated half-life of sugammadex in Rhesus monkey is 30 (SEM=4.9) min[3].

References:

- [1]. de Boer HD, et al. Reversal of profound rocuronium neuromuscular blockade by sugammadex in anesthetized rhesus monkeys. *Anesthesiology*. 2006 Apr;104(4):718-23.
- [2]. 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.
- [3]. 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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