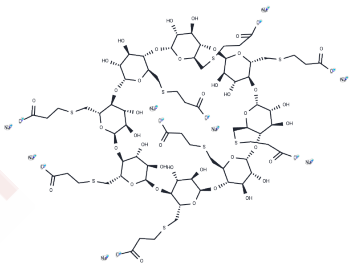
Data Sheet (Cat.No.T5326)

TargetMol

Sugammadex sodium

Chemical Properties



CAS No. : 343306-79-6

Formula: C72H104Na8O48S8

Molecular Weight: 2178.01

Storage: Keep away from moisture
Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Sugammadex sodium (Org25969) , a synthetic derivative of γ-cyclodextrin, is a steroid-based neuromuscular blocker reversing agent.
Targets(IC50)	Others
In vivo	Injection of 100 microg/kg rocuronium resulted in a mean neuromuscular blockade of 93.0%, and profound blockade was achieved by injection of 500 microg/kg. After injection of the high rocuronium dose, the 90% recovery of the train-of-four ratio took 28 min after saline, 26 min after 1 mg/kg sugammadex, and 8 min after 2.5 mg/kg sugammadex. Signs of residual blockade or recurarization were not observed [1]. Treatment with 16 mg/kg and 100 mg/kg sugammadex had a neuroprotective effect in a transient global cerebral I/R rat model. However, 100 mg/kg sugammadex was more neuroprotective in rats [2].
Animal Research	The animals were anesthetized with 80 mg/kg ketamine hydrochloride and 12 mg/kg xylazine administered intraperitoneally. After the rats were anesthetized, the bilateral common carotid arteries were exposed and carefully separated from the carotid sheath and the cervical sympathetic and vagal nerves through a ventral cervical incision. The bilateral common carotid arteries were occluded with nontraumatic aneurysm clips in ischemic rats but were not clamped in sham-operated rats. Complete interruption of the blood flow was confirmed by observing the central artery in the retina with an ophthalmoscope. The body temperature of the rats was maintained at 37.0 ± 0.5°C during this procedure. In this model, 10 minutes of ischemia and 24 hours of reperfusion were induced. After the ischemic period, the rats were treated with sugammadex 16 mg/kg (S 16 group) and sugammadex 100 mg/kg (S 100 group) (intravenous and total volume 1 mL) in the 5th minute of reperfusion. Sugammadex was diluted with normal saline (0.9% NaCl). The same surgical procedure was performed in the I/R group, but the rats were not treated with sugammadex. The neck incision was closed with sutures (3.0 silk), and the animals were allowed to awaken. After 24 hours, the neurological condition of the rats was assessed with a scoring system [2].

Solubility Information

Solubility	H2O: 250 mg/mL (114.78 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
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
50 mM	0.0092 mL	0.0459 mL	0.0918 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

de Boer HD, et al. Reversal of profound rocuronium neuromuscular blockade by sugammadex in anesthetized rhesus monkeys. Anesthesiology. 2006 Apr;104(4):718-23.
Ozbilgin S, et al. Effectiveness of sugammadex for cerebral ischemia/reperfusion injury. Kaohsiung J Med Sci. 2016 Jun;32(6):292-301.