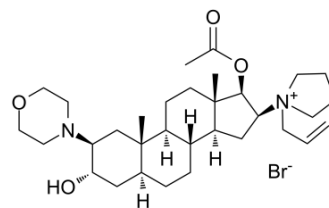


## Rocuronium Bromide

|                    |   |       |          |
|--------------------|---|-------|----------|
| Cat. No.:          | HY-17440  |       |          |
| CAS No.:           | 119302-91-9   |       |          |
| Molecular Formula: | C <sub>32</sub> H <sub>53</sub> BrN <sub>2</sub> O <sub>4</sub> |       |          |
| Molecular Weight:  | 609.68  |       |          |
| Target:            | Others  |       |          |
| Pathway:           | Others  |       |          |
| Storage:           | Powder  | -20°C | 3 years  |
|                    |   | 4°C   | 2 years  |
|                    | In solvent  | -80°C | 6 months |
|                    |   | -20°C | 1 month  |



### SOLVENT & SOLUBILITY

#### In Vitro

DMSO : ≥ 155 mg/mL (254.23 mM)

\* "≥" means soluble, but saturation unknown.

| Preparing Stock Solutions | Solvent       | Mass | 1 mg      | 5 mg      | 10 mg      |
|---------------------------|---------------|------|-----------|-----------|------------|
|                           | Concentration |      |           |           |            |
|                           | 1 mM          |      | 1.6402 mL | 8.2010 mL | 16.4020 mL |
|                           | 5 mM          |      | 0.3280 mL | 1.6402 mL | 3.2804 mL  |
|                           | 10 mM         |      | 0.1640 mL | 0.8201 mL | 1.6402 mL  |

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

### BIOLOGICAL ACTIVITY

#### Description

Rocuronium Bromide (ORG 9426 Bromide) is an aminosteroid non-depolarizing neuromuscular blocker or muscle relaxant used in modern anaesthesia, to facilitate endotracheal intubation and to provide skeletal muscle relaxation during surgery or mechanical ventilation.

#### In Vitro

Rocuronium reduced the indirectly elicited twitch tensions in normal (50% inhibitory concentration [IC(50)], 9.84 [9.64-10.04] μM, mean [95% confidence interval]) and all pretreated diaphragms (P < .01, n = 6) in a concentration-dependent fashion [1]. The ED95 of rocuronium is essentially the same for children as for adults. Its duration of action is similar to vecuronium, and it is shorter for children than for adults. Rocuronium is readily reversed with conventional doses of cholinesterase-inhibiting drugs [2]. Onset time until maximum block, duration until 25% recovery of twitch height, and recovery from 25 until 75% of twitch height were 1.7 (32), 53 (19) and 20 (37) min, respectively [3].

#### In Vivo

Only 8.7±5.7% (SD) and 6.0±2.8% of an injected dose of ORG 9426 and ORG 9616 was excreted into the urine,

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respectively. Conversely,  $54.4 \pm 9.2\%$  and  $52.4 \pm 9.2\%$  of an injected dose of ORG 9426 and  $35.7 \pm 12.2\%$  and  $46.8 \pm 9.7\%$  of ORG 9616 were excreted into the bile in cats without and with renal pedicle ligation, respectively [4].

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## CUSTOMER VALIDATION

- **Hum Mol Genet.** 2015 Aug 15;24(16):4648-59.
- **Sci Rep.** 2017 Apr 5;7:46098.

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## REFERENCES

- [1]. Narimatsu E, Niiya T, Takahashi K, Pralidoxime inhibits paraoxon-induced depression of rocuronium-neuromuscular block in a time-dependent fashion. *Am J Emerg Med.* 2012 Jul;30(6):901-7.
- [2]. Wicks TC. The pharmacology of rocuronium bromide (ORG 9426). *AANA J.* 1994 Feb;62(1):33-8.
- [3]. Wierda JM, Kleef UW, Lambalk LM, The pharmacodynamics and pharmacokinetics of Org 9426, a new non-depolarizing neuromuscular blocking agent, in patients anaesthetized with nitrous oxide, halothane and fentanyl. *Can J Anaesth.* 1991 May;38(4 Pt 1):430-5.
- [4]. Khuenl-Brady K, Castagnoli KP, Canfell PC, The neuromuscular blocking effects and pharmacokinetics of ORG 9426 and ORG 9616 in the cat. *Anesthesiology.* 1990 Apr;72(4):669-74.
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**Caution: Product has not been fully validated for medical applications. For research use only.**

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