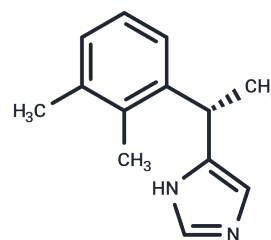


## Dexmedetomidine

## Chemical Properties

CAS No. :	113775-47-6
Formula:	C <sub>13</sub> H <sub>16</sub> N <sub>2</sub>
Molecular Weight:	200.28
Appearance:	no data available
Storage:	Powder: -20°C for 3 years   In solvent: -80°C for 1 year



## Biological Description

Description	Dexmedetomidine is a Central alpha-2 Adrenergic Agonist. The mechanism of action of dexmedetomidine is as an Adrenergic alpha2-Agonist. The physiologic effect of dexmedetomidine is by means of General Anesthesia.
Targets(IC50)	Adrenergic Receptor
In vitro	Dexmedetomidine has a relatively high ratio of $\alpha_2/\alpha_1$ -activity (1620:1 as compared with 220:1 for clonidine) and, therefore, is considered a full agonist of the $\alpha_2$ receptor. This may result in more potent effects of sedation without unwanted cardiovascular effects from $\alpha_1$ receptor activation. The 2-h half-life of dexmedetomidine is nearly 4-fold shorter than that of clonidine, which increases the likelihood that a continuous infusion of dexmedetomidine might be useful for sedation. Dexmedetomidine also has minimum alveolar anesthetic concentration (MAC)-sparing properties, but its use as an anesthetic adjuvant has been complicated by persistent hypotension that has mandated IV fluid administration and vasopressor administration. In addition, its use in large doses is complicated by hypertension from $\alpha_2$ receptor-mediated vascular constriction.

## Solubility Information

Solubility	DMSO: 40 mg/mL (199.72 mM), Sonication is recommended. ( $< 1$ mg/ml refers to the product slightly soluble or insoluble)
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## Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	4.993 mL	24.965 mL	49.9301 mL
5 mM	0.9986 mL	4.993 mL	9.986 mL
10 mM	0.4993 mL	2.4965 mL	4.993 mL
50 mM	0.0999 mL	0.4993 mL	0.9986 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.

### Reference

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