

## Esmolol hydrochloride

## Chemical Properties

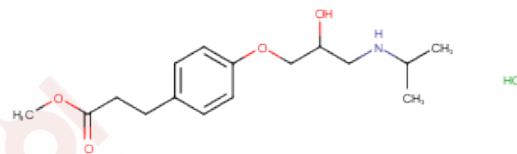
CAS No. : 81161-17-3

Formula: C<sub>16</sub>H<sub>25</sub>NO<sub>4</sub>·HCl

Molecular Weight: 331.15

Storage: 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	Esmolol is a cardioselective beta-blocker used in parenteral forms in the treatment of arrhythmias and severe hypertension. Esmolol has not been linked to instances of clinically apparent drug induced liver injury.
Targets(IC50)	Apoptosis, Mitophagy, Reductase, Caspase, Adrenergic Receptor, Neurokinin receptor, Autophagy
In vitro	The main active site of Esmolol is the sinus node and AV node conduction system, and Esmolol has a rapid onset of action and inactivation.
In vivo	The main active site of Esmolol is the sinus node and AV node conduction system, and Esmolol has a rapid onset of action and inactivation.

## Solubility Information

Solubility	DMSO: 198.9 mM, Sonication is recommended. H <sub>2</sub> O: 150.68 mM, Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween-80+45% Saline: 1 mg/mL (3.02 mM), Sonication is recommended. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.</i>

### Preparing Stock Solutions

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	1mg	5mg	10mg
1 mM	3.0198 mL	15.0989 mL	30.1978 mL
5 mM	0.604 mL	3.0198 mL	6.0396 mL
10 mM	0.302 mL	1.5099 mL	3.0198 mL
50 mM	0.0604 mL	0.302 mL	0.604 mL

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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

- Wiest D, et al. Clin Pharmacokinet, 1995, 28(3), 190-202.
- Suzuki T, et al. Crit Care Med, 2005, 33(10), 2294-2301.
- Sasao J, et al. Can J Anaesth, 2001, 48(10), 985-989.
- Sugiyama A, et al. J Cardiovasc Pharmacol, 1999, 34(1), 70-77.

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