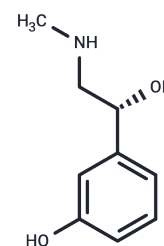


## Phenylephrine

## Chemical Properties

CAS No. :	59-42-7
Formula:	C <sub>9</sub> H <sub>13</sub> NO <sub>2</sub>
Molecular Weight:	167.21
Storage:	Keep away from moisture Powder: -20°C for 3 years   In solvent: -80°C for 1 year <small>Actual storage temperature shall be subject to the COA.</small>



## Biological Description

Description	Phenylephrine ((R)-(-)-Phenylephrine) is a selective $\alpha$ 1-adrenoceptor agonist ( pKi: 5.86, 4.87 and 4.70 for $\alpha$ 1D, $\alpha$ 1B, and $\alpha$ 1A receptors respectively).
Targets(IC50)	Adrenergic Receptor
In vitro	Phenylephrine promotes cardiac fibroblast proliferation. Phenylephrine activates CaN and evokes NFAT3 nuclear translocation. It suggests that the Ca(2+)/CaN/NFAT pathway mediates Phenylephrine-induced cardiac fibroblast proliferation, and this pathway might be a possible therapeutic target in cardiac fibrosis [1][2][3].
In vivo	Phenylephrine could enhance the alveolar fluid clearance in high tidal volume-ventilated rats and accelerate the absorption of pulmonary edema. Perfusion of hearts with Phenylephrine (100 $\mu$ M) induces a rapid (maximal at 10 min) 12-fold activation of two p38-MAPK isoforms. $\alpha$ 1-adrenoceptor agonists such as Phenylephrine increase the contractility of the heart. Phenylephrine also activates SAPKs/JNKs in neonatal ventricular myocytes [4][5].

## Solubility Information

Solubility	DMSO: 100 mg/mL (598.05 mM),Sonication is recommended. H <sub>2</sub> O: 5 mg/mL (29.9 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: 5 mg/mL (29.9 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

	1mg	5mg	10mg
1 mM	5.9805 mL	29.9025 mL	59.805 mL
5 mM	1.1961 mL	5.9805 mL	11.961 mL
10 mM	0.5981 mL	2.9903 mL	5.9805 mL
50 mM	0.1196 mL	0.5981 mL	1.1961 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

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