

Phenylbiguanide

Chemical Properties

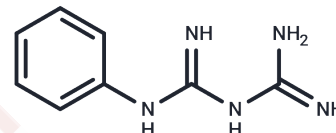
CAS No. : 102-02-3

Formula: C₈H₁₁N₅

Molecular Weight: 177.21

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	Phenylbiguanide (N-Phenylbiguanide) is a 5-HT ₃ receptor selective agonist (EC ₅₀ : 3.0 ±0.1 μM)
Targets(IC ₅₀)	5-HT Receptor
In vivo	Phenylbiguanide (PBG) is a drug known to stimulate cardiopulmonary afferent C-fibres. PBG is injected into the right atrium of the heart in anaesthetised mice and mapped c-Fos expression within specific regions of the central nervous system. Intraatrial injection of PBG produces a reflex cardiorespiratory response including a pronounced bradycardia and a respiratory depression[1].

Solubility Information

Solubility	DMSO: 150 mg/mL (846.45 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: 4 mg/mL (22.57 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	5.643 mL	28.2151 mL	56.4302 mL
5 mM	1.1286 mL	5.643 mL	11.286 mL
10 mM	0.5643 mL	2.8215 mL	5.643 mL
50 mM	0.1129 mL	0.5643 mL	1.1286 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 Vries A, Paton JF, Lightman SL, et al. Characterisation of c-Fos expression in the central nervous system of mice following right atrial injections of the 5-HT₃ receptor agonist phenylbiguanide[J]. *Auton Neurosci.* 2005 Dec 30;123(1-2):62-75.

Benuck M, Reith M E A. Dopamine releasing effect of phenylbiguanide in rat striatal slices[J]. *Archiv für Experimentelle Pathologie und Pharmakologie*, 1992, 345(6):666-672.

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