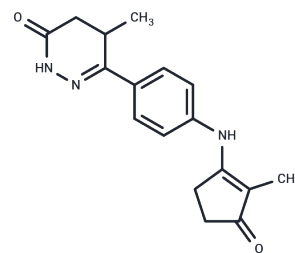


NSP-805

Chemical Properties

CAS No. : 125068-54-4
Formula: C₁₇H₁₉N₃O₂
Molecular Weight: 297.35
Appearance: no data available
Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year



Biological Description

Description	NSP-805 is a potent and selective guinea pig cardiac phosphodiesterase 3 (PDE3) inhibitor.
Targets(IC50)	PDE
In vitro	In isolated guinea pig left atria, the positive inotropic EC ₅₀ values (microM) in order of potency were about 0.18 (NSP-805), 0.39 (indolidan), 1.1 (MCI-154), 1.7 (NSP-804, milrinone), 2.0 (denopamine), 4.0 (papaverine), 4.4 3-isobutyl-1-methylxanthine, IBMX, 6.5 (imazodan), and 27 (amrinone)[1].
In vivo	In anesthetized dogs, intravenous (i.v.) injection of NSP-804 and NSP-805 produced dose-dependent increases in left ventricular VVdp/dtmax and decreases in aortic blood pressure (ABP) with relatively small increases in heart rate (HR).?The ED ₅₀ values (micrograms/kg) for LVdP/dtmax of NSP-804, NSP-805, denopamine, milrinone, MCI-154, and indolidan were 15, 12, 22, 23, 15, and 7.3, respectively.?When the drugs were administered intraduodenally to anesthetized dogs, the ED ₅₀ values (micrograms/kg) for LVdP/dtmax of NSP-804, NSP-805, milrinone and indolidan were approximately 30, 10, 200, and 25 respectively.?In the propranolol-induced heart failure model, NSP-804 and NSP-805 completely improved the hemodynamic state of heart failure to normal levels.?The in vitro positive inotropic effects of NSP-804 and NSP-805 were accompanied by increases in tissue cyclic AMP and abolished by carbachol.?NSP-805 was the most potent and selective inhibitor of guinea pig cardiac phosphodiesterase (PDE) III among the agents examined, and NSP-804 was a potent and selective inhibitor of PDE III similar to indolidan[1].

Solubility Information

Solubility	DMSO: 20 mg/ml (67.26 mM) (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.363 mL	16.8152 mL	33.6304 mL
5 mM	0.6726 mL	3.363 mL	6.7261 mL
10 mM	0.3363 mL	1.6815 mL	3.363 mL
50 mM	0.0673 mL	0.3363 mL	0.6726 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

Mochizuki N, et al. Cardiovascular effects of NSP-804 and NSP-805, novel cardiotonic agents with vasodilator properties. J Cardiovasc Pharmacol. 1993 Jun;21(6):983-95.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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