
Product Data Sheet

Product Name: NSP-805
Cat. No.: GC32572

Chemical Properties

Cas. No. 125068-54-4

SMILES O=C1CC(C)C(C2=CC=C(NC3=C(C)C(CC3)=O)C=C2)=NN1

Formula $C_{17}H_{19}N_3O_2$ M.Wt 297.35

Solubility Soluble in DMSO Storage Store at $-20^{\circ}C$

General tips For obtaining a higher solubility, please warm the tube at $37^{\circ}C$ and shake it in the ultrasonic bath for a while. Stock solution can be stored below $-20^{\circ}C$ for several months.

Shipping Condition Evaluation sample solution: ship with blue ice. All other available size: ship with RT, or blue ice upon request.

Structure

Background

NSP-805 is a potent and selective inhibitor of guinea pig cardiac phosphodiesterase 3 (PDE3), and a cardiotonic agent with vasodilator properties.

In isolated guinea pig left atria, NSP-805 shows positive inotropic EC_{50} value in order of potency of $0.18 \mu M$. The in vitro positive inotropic effects of NSP-805 is accompanied by increases in tissue cyclic AMP and abolished by carbachol[1].

In anesthetized dogs, intravenous (i.v.) injection of NSP-805 produces dose-dependent increases in left ventricular VdP/dt_{max} and decreases in aortic blood pressure (ABP) with relatively small increases in heart rate (HR). The ED_{50} value for $LVdP/dt_{max}$ of NSP-805 is $12 \mu g/kg$. When the drug is administered intraduodenally to anesthetized dogs, the ED_{50} value for $LVdP/dt_{max}$ of NSP-805, is approximately $10 \mu g/kg$. In the propranolol-induced heart failure model, NSP-805 completely improves the hemodynamic state of heart failure to normal levels[1]. NSP-805 ($100 \mu g/kg$) reduces systemic blood pressure significantly, but the increase of chorio-retinal blood flow is less than that at the low dose of NSP-805 ($40 \mu g/kg$) in rabbit eyes[2].

Caution: Product has not been fully validated for medical applications. For research use only.

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[1]. 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. [2]. Uchida H, et al. [The effect of phosphodiesterase type 3 inhibitor on chorio-retinal blood flow in rabbits eyes]. Nippon Ganka Gakkai Zasshi. 2002 Oct;106(10):615-20.

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