

Milrinone

Catalog No: tcsc1367



Available Sizes

Size: 50mg

Size: 100mg



Specifications

CAS No:

78415-72-2

Formula:

$C_{12}H_9N_3O$

Pathway:

Metabolic Enzyme/Protease

Target:

Phosphodiesterase (PDE)

Purity / Grade:

>98%

Solubility:

DMSO : ≥ 46 mg/mL (217.78 mM)

Alternative Names:

Win 47203

Observed Molecular Weight:

211.22

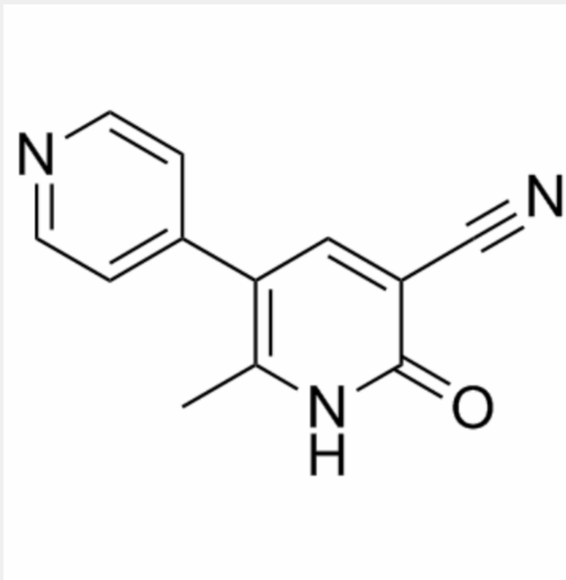
Product Description

Milrinone is a **PDE3** inhibitor, and also an inotrope and vasodilator.

In Vitro:

Milrinone (1 μ M) increases PKA activity in hypoxic myocytes to normoxic levels. Milrinone (50 nM) normalizes TP receptor sensitivity in hypoxic myocytes by restoring PKA-mediated regulatory TP receptor phosphorylation^[1]. Milrinone significantly reduces NE-induced vasoconstriction, attenuating both NE sensitivity and maximal tension generation. Inhibition of ATP-sensitive K⁺ channels or voltage-gated K⁺ channels do not prevent the milrinone-induced attenuation of NE responses^[4].

In Vivo: Milrinone (1 μ g/kg/min, i.v.) significantly reduces PAP, PVR ($-18.96 \pm 1.7\%$), and LAP ($-26.03 \pm 2.3\%$) in congestive heart failure (CHF) rats. Milrinone (1 mg/mL, inhalation) results in a near-maximal reduction of PAP without significant effects on AP, decreases pulmonary artery pressure similarly in a larger collective of CHF rats. Milrinone inhalation selectively increases cAMP but not cGMP plasma concentrations in both groups. Repeated milrinone inhalations even reduce lung wet/dry weight ratio^[2]. Milrinone (49.5 μ g) largely shifts the ESPVR upwards and significantly increases end-systolic pressure (ESP(0.08)) and the systolic pressure-volume area (PVA(0.08)) at a mid-range LV volume (0.08 mL/g myocardium). Milrinone also slightly decreases LV ESP(ESV) and decreased Ea^[3].



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