Web: www.taiclone.com
Tel: +886-2-2735-9682
Email: order@taiclone.com

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:

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Milrinone (1 μM) 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 μg/kg/min, i.v.) significantly reduces PAP, PVR (−18.96 ± 1.7%), and LAP (−26.03 ± 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 μg) 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].