Olprinone Hydrochloride

Cat. No.: HY-14254

CAS No.: 119615-63-3

Molecular Formula: $C_{14}H_{11}ClN_4O$

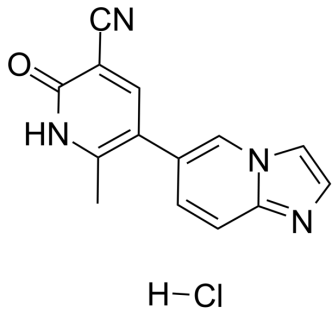
Molecular Weight: 286.72

Target: Phosphodiesterase (PDE)

Pathway: Metabolic Enzyme/Protease

Storage: 4°C, sealed storage, away from moisture

* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro

H_2O : ≥ 7.69 mg/mL (26.82 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	3.4877 mL	17.4386 mL	34.8772 mL
5 mM	0.6975 mL	3.4877 mL	6.9754 mL
10 mM	0.3488 mL	1.7439 mL	3.4877 mL

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description

Olprinone (Loprinone) Hydrochloride is a potent phosphodiesterase (PDE) 3 inhibitor, with IC_{50}s of 150, 100, 0.35 and 14 μM for PDE1, PDE2, PDE3 and PDE4, respectively. Olprinone Hydrochloride is used for the research of heart failure due to its positive inotropic and vasodilative effects. Anti-inflammatory activity[1][2].

In Vivo

Olprinone (Loprinone) Hydrochloride (0.2 mg/kg; i.p.) modulates the inflammation associated with myocardial ischemia-reperfusion injury in rats[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Male adult Wistar rats (250-300 g) (ischemia–reperfusion rats)[1]
Dosage:	0.2 mg/kg
Administration:	I.p. (administered 15 min after ischemia)
Result:	Significantly reduced the: (1) histological evidence of myocardial injury, (2) pro-

	inflammatory cytokines: tumor necrosis factor-α (TNF-α) and Interleukin-1β (IL-1β), (3) adhesion molecules: Inter-Cellular Adhesion Molecule 1 (ICAM-1) and P-Selectin, (4) nitrotyrosine formation, (5) nuclear factor kappa-B (NF-κB) expression, (6) Poly (ADP-ribose) (PAR) formation, and (7) apoptosis (Bax, Bcl-2, Fas-L and terminal deoxynucleotidyl transferase-mediated UTP end labeling (TUNEL).

REFERENCES

[1]. Sugioka M, et al. Identification and characterization of isoenzymes of cyclic nucleotide phosphodiesterase in human kidney and heart, and the effects of new cardiotonic agents on these isoenzymes. Naunyn Schmiedebergs Arch Pharmacol. 1994;350(3):284-293.

[2]. Di Paola R, et al. Olprinone, a PDE3 inhibitor, modulates the inflammation associated with myocardial ischemia-reperfusion injury in rats. Eur J Pharmacol. 2011;650(2-3):612-620.

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

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