Product Data Sheet

Product Name: Olprinone
Cat. No.: GC36803

Chemical Properties

Cas. No.	106730-54-5		
SMILES	CC(N1)=C(C=C(C#N)C1=O)C2=CN3C(C=C2)=NC=C3		
Formula	$C_{14}H_{10}N_4O$	M.Wt	250.26
Solubility	DMSO : 50mg/mL	Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20℃ 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	Olprinone		

Background

Olprinone is an inhibitor of phosphodiesterase 3 (PDE3; IC_{50} = 0.35 µM for human cardiac enzyme).[1] It is selective for PDE3 over PDE1 and PDE2 (IC_{50}s = 150 and 100 µM, respectively). Olprinone induces relaxation of precontracted isolated rabbit renal and carotid arterial rings (IC_{50}s = 40 and 103 nM, respectively).[2] It reduces infarct size and improves cardiac function in a rat model of myocardial ischemia-reperfusion injury when administered at a dose of 0.6 mg/kg twice per day.[3] Olprinone (0.2 mg/kg) reduces cortical and striatal damage, as well as reduces injured cerebral tissue nitrotyrosine formation, apoptosis, and levels of inducible nitric oxide synthase (iNOS), IL-1β, and intercellular adhesion molecule 1 (ICAM-1) in a rat model of cerebral ischemia-reperfusion injury.[4] It inhibits neutrophil infiltration into the lungs and inhibits increases in serum levels of TNF-α and IL-6 in a rat model of LPS-induced lung inflammation when administered at a dose of 0.2 mg/kg.[5]

1.Sugioka, M., Masuoka, H., Ichikawa, K., et al.Identification and characterization of isoenzymes of cyclic nucleotide phosphodiesterase in human kidney and heart, and the

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effects of new cardiotonic agents on these isoenzymesNaunyn. Schmiedebergs. Arch. Pharmacol.350(3)284-293(1994) 2.Minonishi, T., Ogawa, K., Tokinaga, Y., et al.Differential vasodilation response to olprinone in rabbit renal and common carotid arteriesJ. Anesth.24(1)61-66(2010) 3.Han, M.-X., Xu, X.-W., Lu, S.-Q., et al.Effect of olprinone on ischemia-reperfusion induced myocardial injury in ratsBiomed. Pharmacother.1111005-1012(2019) 4.Genovese, T., Mazzon, E., Paterniti, I., et al.Neuroprotective effects of olprinone after cerebral ischemia/reperfusion injury in ratsNeurosci. Lett.503(2)93-99(2011) 5.Koike, T., Nadeen Qutab, M., Tsuchida, M., et al.Pretreatment with olprinone hydrochloride, a phosphodiesterase III inhibitor, attenuates lipopolysaccharide-induced lung injury via an anti-inflammatory effectPulm. Pharmacol.21(1)166-171(2008)

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