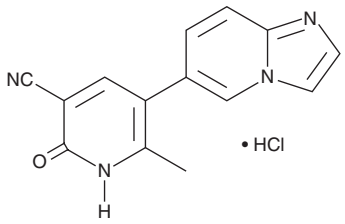
PRODUCT INFORMATION

Olprinone (hydrochloride)

Item No. 28396

CAS Registry No.:	119615-63-3
Formal Name:	1,2-dihydro-5-imidazo[1,2-a]pyridin-6-yl-6-methyl-2-oxo-3-pyridinecarbonitrile, monohydrochloride
Synonym:	Loprinone
MF:	$C_{14}H_{10}N_4O \bullet HCl$
FW:	286.7
Purity:	≥98%
UV/Vis.:	λ_{max}: 219, 262, 345 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Description

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]

References

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 effects of new cardiotonic agents on these isoenzymes. *Naunyn. 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 arteries. *J. 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 rats. *Biomed. Pharmacother.* **111**, 1005-1012 (2019).
4. Genovese, T., Mazzon, E., Paterniti, I., *et al.* Neuroprotective effects of olprinone after cerebral ischemia/reperfusion injury in rats. *Neurosci. 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 effect. *Pulm. Pharmacol.* **21(1)**, 166-171 (2008).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.**CAYMANCHEM**.COM