

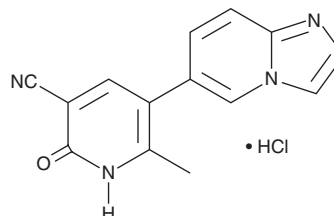
# PRODUCT INFORMATION



## 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<sub>14</sub>H<sub>10</sub>N<sub>4</sub>O • HCl  
**FW:** 286.7  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 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<sub>50</sub> = 0.35 μM for human cardiac enzyme).<sup>1</sup> It is selective for PDE3 over PDE1 and PDE2 (IC<sub>50</sub>s = 150 and 100 μM, respectively). Olprinone induces relaxation of precontracted isolated rabbit renal and carotid arterial rings (IC<sub>50</sub>s = 40 and 103 nM, respectively).<sup>2</sup> 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.<sup>3</sup> 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.<sup>4</sup> 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.<sup>5</sup>

### 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 cardiogenic agents on these isoenzymes. *Naunyn. Schmiedeberg's 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., Mazzone, 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).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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