

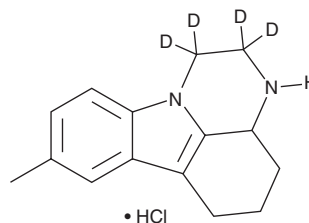
# PRODUCT INFORMATION



## Pirlindole-d<sub>4</sub> (hydrochloride)

Item No. 33375

**CAS Registry No.:** 1801617-88-8  
**Formal Name:** 2,3,3a,4,5,6-hexahydro-2-d-8-methyl-1H-pyrazino[3,2,1-jk]carbazole-1,1,2-d<sub>3</sub>, monohydrochloride  
**MF:** C<sub>15</sub>H<sub>14</sub>D<sub>4</sub>N<sub>2</sub> • HCl  
**FW:** 266.8  
**Chemical Purity:** ≥98% (Pirlindole)  
**Deuterium Incorporation:** ≥99% deuterated forms (d<sub>1</sub>-d<sub>4</sub>); ≤1% d<sub>0</sub>  
**Supplied as:** A solid  
**Storage:** -20°C  
**Stability:** ≥4 years



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

### Laboratory Procedures

Pirlindole-d<sub>4</sub> (hydrochloride) is intended for use as an internal standard for the quantification of pirlindole (Item No. 22060) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated versus unlabeled).

Pirlindole-d<sub>4</sub> (hydrochloride) is supplied as a solid. A stock solution may be made by dissolving the pirlindole-d<sub>4</sub> (hydrochloride) in the solvent of choice, which should be purged with an inert gas. Pirlindole-d<sub>4</sub> (hydrochloride) is soluble in methanol and DMSO.

### Description

Pirlindole is a selective and reversible monoamine oxidase A (MAO-A) inhibitor (IC<sub>50</sub>s = 250 and 34.2 nM for rat brain and heart MAO-A, respectively).<sup>1</sup> It is selective for MAO-A over MAO-B (K<sub>i</sub>s = 52,100 and 59,900 nM, for rat brain and heart MAO-B, respectively). In rats, it reverses the depressive-like effects induced by chronic mild stress (CMS), increases proliferation of hippocampal neural progenitor cells, and reverses dendritic atrophy in granule neurons.<sup>2</sup> Pirlindole is also an inhibitor of enterovirus-D68 and coxsackievirus B3 (CV-B3), inhibiting the genome replication phase of CV-B3 infection with an EC<sub>50</sub> value of 7.7 μM independent of MAO-A activity.<sup>3</sup>

### References

1. Bruhwyler, J., Liégeois, J.F., and Géczy, J. Pirlindole: A selective reversible inhibitor of monoamine oxidase A. A review of its preclinical properties. *Pharmacol. Res.* **36(1)**, 23-33 (1997).
2. Morais, M., Santos, P.A., Mateus-Pinheiro, A., et al. The effects of chronic stress on hippocampal adult neurogenesis and dendritic plasticity are reversed by selective MAO-A inhibition. *J. Psychopharmacol.* **28(12)**, 1178-1183 (2014).
3. Ulferts, R., de Boer, S.M., van der Linden, L., et al. Screening of a library of FDA-approved drugs identifies several enterovirus replication inhibitors that target viral protein 2C. *Antimicrob. Agents Chemother.* **60(5)**, 2627-2638 (2016).

#### 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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