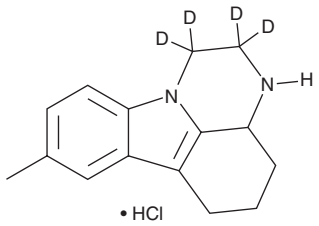
PRODUCT INFORMATION

Pirlindole-d_4 (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_3, monohydrochloride
MF: $C_{15}H_{14}D_4N_2 \bullet HCl$
FW: 266.8
Chemical Purity: ≥98% (Pirlindole)
Deuterium Incorporation: ≥99% deuterated forms (d_1-d_4); ≤1% d_0
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_4 (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_4 (hydrochloride) is supplied as a solid. A stock solution may be made by dissolving the pirlindole-d_4 (hydrochloride) in the solvent of choice, which should be purged with an inert gas. Pirlindole-d_4 (hydrochloride) is soluble in methanol and DMSO.

Description

Pirlindole is a selective and reversible monoamine oxidase A (MAO-A) inhibitor (IC_{50}s = 250 and 34.2 nM for rat brain and heart MAO-A, respectively).[1] It is selective for MAO-A over MAO-B (K_is = 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.[2] 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_{50} value of 7.7 µM independent of MAO-A activity.[3]

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).

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