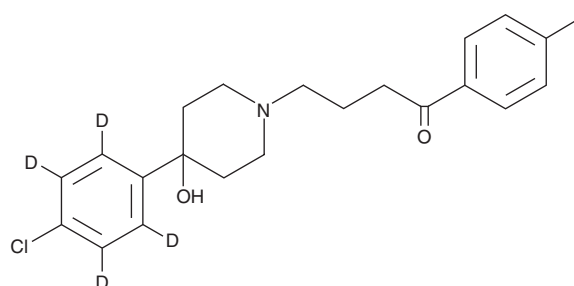


PRODUCT INFORMATION



Haloperidol-d₄ Item No. 26116

CAS Registry No.: 1189986-59-1
Formal Name: 4-(4-(4-chlorophenyl-2,3,5,6-d₄)-4-hydroxypiperidin-1-yl)-1-(4-fluorophenyl)butan-1-one
MF: C₂₁H₁₉ClD₄FNO₂
FW: 379.9
Chemical Purity: ≥98% (Haloperidol)
Deuterium Incorporation: ≥99% deuterated forms (d₁-d₄); ≤1% d₀
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

Haloperidol-d₄ is intended for use as an internal standard for the quantification of haloperidol (Item No. 12014) 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).

Haloperidol-d₄ is supplied as a solid. A stock solution may be made by dissolving the haloperidol-d₄ in the solvent of choice, which should be purged with an inert gas. Haloperidol-d₄ is slightly soluble in chloroform and methanol.

Description

Haloperidol is a typical antipsychotic and dopamine D₂-like receptor antagonist (K_is = 0.6, 0.2, and 22 nM, for D₂, D₃, and D₄ receptors, respectively).¹ It also acts as an inverse agonist at dopamine D₂ and D₃ receptors (IC₅₀s = 0.8 and 0.6 nM, respectively). Haloperidol also binds to α₁- and α₂-adrenergic and histamine H₁ receptors, as well as the serotonin (5-HT) receptor subtypes 5-HT_{1D} and 5-HT_{2A} (K_ds = 17, 600, 260, 40, and 61 nM, respectively).² It inhibits stereotypic behavior induced by apomorphine (Item No. 16094) and amphetamine in rats (ID₅₀s = 0.532 and 0.101 μmol/kg, respectively).³ Haloperidol also inhibits apomorphine-induced decreases in prepulse inhibition of the acoustic startle response in rats in a dose-dependent manner.⁴ Formulations containing haloperidol have been used in the treatment of schizophrenia and Tourette syndrome.

References

1. Burstein, E.S., Ma, J., Wong, S., et al. *J. Pharmacol. Exp. Ther.* **315**(3), 1278-1287 (2005).
2. Richelson, E. and Souder, T. *Life Sciences* **68**(1), 29-39 (2000).
3. Creese, I., Burt, D.R., and Snyder, S.H. *J. Neuropsychiatry Clin. Neurosci.* **8**(2), 223-226 (1996).
4. Swerdlow, N.R. and Geyer M.A. *Pharmacol. Biochem. Behav.* **44**(3), 741-744 (1993).

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.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 12/20/2022

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