

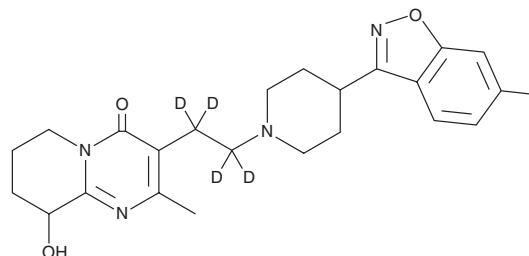
PRODUCT INFORMATION



Paliperidone-d₄

Item No. 28484

CAS Registry No.: 1020719-55-4
Formal Name: 3-[2-[4-(6-fluoro-1,2-benzisoxazol-3-yl)-1-piperidinyl]ethyl-1,1,2,2-d₄]-6,7,8,9-tetrahydro-9-hydroxy-2-methyl-4H-pyrido[1,2-a]pyrimidin-4-one
Synonym: 9-hydroxy Risperidone-d₄
MF: C₂₃H₂₃D₄FN₄O₃
FW: 430.5
Chemical Purity: ≥95% (Paliperidone)
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

Paliperidone-d₄ is intended for use as an internal standard for the quantification of paliperidone (Item No. 15556) 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).

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

Description

Paliperidone is an atypical antipsychotic.¹ It is an inverse agonist of dopamine D₂ and D₃ receptors (IC₅₀s = 1 and 0.9 nM, respectively), as well as an antagonist at these receptors (K_is = 0.4 and 0.1 nM, respectively).² Paliperidone also binds to α₁- and α₂-adrenergic receptors, histamine H₁ receptors, and the serotonin (5-HT) receptor subtypes 5-HT_{1A}, 5-HT_{1D}, 5-HT_{2A}, and 5-HT_{2C} (K_ds = 10.1, 80, 3.4, 480, 19, 1.21, and 48 nM, respectively).³ It improves spatial working memory in a T-maze alternation task in a maternal immune activation mouse model of schizophrenia when administered at a dose of 0.05 mg/kg per day.¹ Paliperidone is also an active metabolite of the atypical antipsychotic risperidone (Item No. 13629).³ Formulations containing paliperidone have been used in the treatment of schizophrenia and schizoaffective disorder.

References

1. MacDowell, K.S., Munarriz-Cuezva, E., Caso, J.R., *et al.* *Neuropharmacology* **116**, 196-207 (2017).
2. Burstein, E.S., Ma, J., Wong, S., *et al.* *J. Pharmacol. Exp. Ther.* **315**(3), 1278-1287 (2005).
3. Richelson, E. and Souder, T. *Life Sci.* **68**(1), 29-39 (2000).

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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