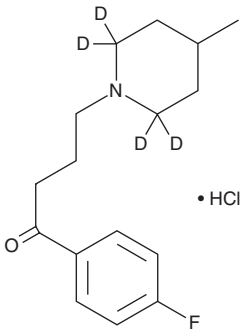
PRODUCT INFORMATION

Melperone-d_4 (hydrochloride)

Item No. 31489

CAS Registry No.:	1219798-80-7
Formal Name:	1-(4-fluorophenyl)-4-(4-methylpiperidin-1-yl-2,2,6,6-d_4)butan-1-one, monohydrochloride
Synonym:	Methylperone-d_4
MF:	$C_{16}H_{18}D_4FNO \bullet HCl$
FW:	303.8
Chemical Purity:	≥98% (Melperone)
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

Melperone-d_4 (hydrochloride) is intended for use as an internal standard for the quantification of melperone (Item No. 19770) 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).

Melperone-d_4 (hydrochloride) is supplied as a solid. A stock solution may be made by dissolving the melperone-d_4 (hydrochloride) in the solvent of choice, which should be purged with an inert gas. Melperone-d_4 (hydrochloride) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide.

Description

Melperone is an atypical antipsychotic.[1] It binds to α_1- and α_2-adrenergic and dopamine D_2 receptors (K_ds = 180, 150, and 180 nM, respectively), as well as the serotonin (5-HT) receptor subtype 5-HT_{2A} (K_d = 102 nM). It is selective for these receptors over histamine H_1, muscarinic, 5-HT_{1A}, 5-HT_{1D}, and 5-HT_{2C} receptors (K_ds = 580, >10,000, 2,200, 3,400, and 2,100 nM, respectively). Melperone (2 mg/kg per day) increases basal, but not amphetamine-induced, extracellular dopamine levels in the rat nucleus accumbens.[2]

References

1. Richelson, E. and Souder, T. Binding of antipsychotic drugs to human brain receptors focus on newer generation compounds. *Life Sci.* **68(1)**, 29-39 (2000).
2. Ichikawa, J. and Meltzer, H.Y. The effect of chronic atypical antipsychotic drugs and haloperidol on amphetamine-induced dopamine release in vivo. *Brain Res.* **574(1-2)**, 98-104 (1992).

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