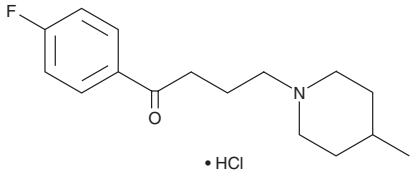
PRODUCT INFORMATION

Melperone (hydrochloride)

Item No. 19770

CAS Registry No.:	1622-79-3
Formal Name:	1-(4-fluorophenyl)-4-(4-methyl-1-piperidinyl)-1-butanone, monohydrochloride
Synonyms:	FG 5111, Methylperone
MF:	$C_{16}H_{22}FNO \bullet HCl$
FW:	299.8
Purity:	≥98%
UV/Vis.:	λ_{max}: 245, 337 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥2 years



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

Laboratory Procedures

Melperone (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the melperone (hydrochloride) in the solvent of choice, which should be purged with an inert gas. Melperone (hydrochloride) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of melperone (hydrochloride) is approximately 20 mg/ml in ethanol and DMSO and 30 mg/ml in DMF.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of melperone (hydrochloride) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of melperone (hydrochloride) in PBS, pH 7.2, is approximately 2 mg/ml. We do not recommend storing the aqueous solution for more than one day.

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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