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ProductInformation

Haloperidol

Product Number **H 1512**
Store at Room Temperature

Product Description

Molecular formula: $C_{21}H_{23}ClFNO_2$
Molecular weight: 375.9
CAS number: 52-86-8
Melting point: 148–149.4 °C[1]
PK_a = 8.3[2]
λ_{max} = 247 nm, 221 nm[1]
Extinction coefficient: E^{mM} = 13.3 (247 nm), 15.0 (221 nm)[1]

Synonyms: 4-[4-(p-Chlorophenyl)-4-hydroxypiperidino]-4'-fluorobutyrophenone; 4-[4-(4-Chlorophenyl)-4-hydroxypiperidino]-4'-fluorobutyrophenone; 4-[4-(4-Chlorophenyl)-4-hydroxy-1-piperidinyl]-1-(4-fluorophenyl)-1-butanone; Haldol®.

Haloperidol is a butyrophenone antipsychotic. It is also classified as a neuroleptic (powerful tranquilizer). It acts as a D_2, D_3, and D_4 dopamine receptor antagonist.

A study on the effect of haloperidol on the expression of heat shock protein in the brain of phencyclidine-treated rats has been published.[3] The effect of haloperidol on prepulse inhibition in N-Methyl-D-Aspartic Acid (NMDA) treated rats has also been studied.[4] The effect of haloperidol on rat C6 glioma cells has also been published.[5] A comprehensive review article has been published.[6]

Precautions and Disclaimer

For Laboratory Use Only. Not for drug, household or other uses.

Preparation Instructions

The product has very low solubility in water (1.4 mg/100 ml), but it is freely soluble in chloroform, benzene, methanol, acetone, and dilute acids.[1] It is soluble in 0.1 N hydrochloric acid (3 mg/ml) with heating. The hydrochloride salt of haloperidol is soluble in water (3 mg/ml).[1]

References

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3. Nakahara, T., Effects of atypical antipsychotic drugs vs. haloperidol on expression of heat shock protein in the discrete brain regions of phencyclidine-treated rats. Brain Res. Mol. Brain Res., **73(1-2)**, 193–197 (1999).
4. Zhang, W., et al., Disruption of prepulse inhibition following N-methyl-D-aspartate infusion into the ventral hippocampus is antagonized by clozapine but not by haloperidol: a possible model for the screening of atypical antipsychotics. Neuroreport, **10(12)**, 2533–2538 (1999).
5. Kim, S. K., et al., Expression of neuropeptide Y by glutamatergic stimulation in rat C6 glioma cells. Neurochem. Int., **36(1)**, 19–26 (2000).
6. Janicki, C. A., and Ko, C. Y., in Anal. Profiles Drug Subs., Vol. 9, Florey, K., ed., Academic Press (New York, NY: 1980), pp. 341–369.

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