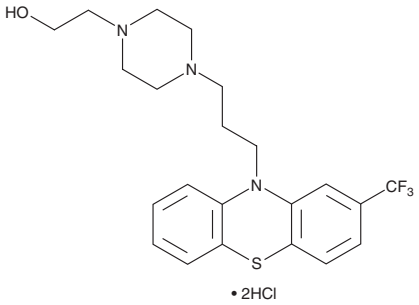
PRODUCT INFORMATION

Fluphenazine (hydrochloride)

Item No. 23555

CAS Registry No.:	146-56-5
Formal Name:	4-[3-[2-(trifluoromethyl)-10H-phenothiazin-10-yl]propyl]-1-piperazineethanol, dihydrochloride
Synonym:	SQ 4,918
MF:	$C_{22}H_{26}F_3N_3OS \bullet 2HCl$
FW:	510.4
Purity:	≥95%
UV/Vis.:	λ_{max}: 259, 311 nm
Supplied as:	A crystalline 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

Fluphenazine is supplied as a crystalline solid. A stock solution may be made by dissolving the fluphenazine in the solvent of choice, which should be purged with an inert gas. Fluphenazine is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of fluphenazine in these solvents is approximately 5, 20, and 30 mg/ml, respectively.

Description

Fluphenazine is a dopamine D_1 and D_2 receptor antagonist (K_is = 5 and 0.63 nM, respectively) and an active metabolite of fluphenazine decanoate (Item No. 39903).[1] It also binds to histamine H_1, serotonin 5-HT_{2A}, and 5-HT_{2B} receptors (K_is = 45, 17, and 82 nM, respectively).[2] It acts as an inverse agonist at H_1 and 5-HT_{2A} receptors.[2,3] Fluphenazine is a typical antipsychotic compound. It induces extrapyramidal symptoms in animal models, including monkeys.[4] Formulations containing fluphenazine have been used in the management of psychotic disorders.

References

1. Meltzer, H.Y., Matsubara, S., and Lee, J.-C. Classification of typical and atypical antipsychotic drugs on the basis of dopamine D-1, D-2 and serotonin$_2$ pK_i values. *J. Pharmacol. Exp. Ther.* **251(1)**, 238-246 (1989).
2. Weiner, D.M., Burstein, E.S., Nash, N.R., *et al.* 5-hydroxytryptamine2A receptor inverse agonists as antipsychotics. *J. Pharmacol. Exp. Ther.* **299(1)**, 268-276 (2001).
3. Appl, H., Holzammer, T., Dove, S., *et al.* Interactions of recombinant human histamine H_1, H_2, H_3, and H_4 receptors with 34 antidepressants and antipsychotics. *Maunyn-Schmiedeberg's Arch. Pharmacol.* **385(2)**, 145-170 (2012).
4. Kovacic, B. and Domino, E.F. Fluphenazine-induced acute and tardive dyskinesias in monkeys. *Psychopharmacology (Berl.)* **84(3)**, 310-314 (1984).

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