Fluphenazine decanoate dihydrochloride

Cat. No.: HY-B1904A

CAS No.: 2376-65-0

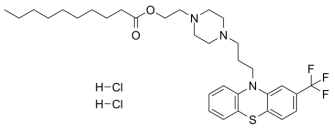
Molecular Formula: $C_{32}H_{46}Cl_2F_3N_3O_2S$

Molecular Weight: 664.69

Target: Dopamine Receptor

Pathway: GPCR/G Protein; Neuronal Signaling

Storage: Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Fluphenazine decanoate dihydrochloride is a dopamine D_2 receptor inhibitor, is a long-acting phenothiazine neuroleptic. Fluphenazine can be used for schizophrenia research[1][2][3].
IC_{50} & Target	D_2 Receptor
In Vitro	Fluphenazine decanoate dihydrochloride shows activity against T. gondii in human fibroblast cell cultures with an IC_{50} value of 1.7 mM[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Fluphenazine decanoate dihydrochloride (0.22 mg/kg and followed by 0.33 mg/kg; i.m.; 8 times every 3 weeks), as an antipsychotic, increases sensitivity to dopamine on monkey model following extended treatment[2]. Fluphenazine decanoate dihydrochloride (25 mg/kg; i.m.; 6 times every 3 weeks; 24 weeks) induces mouth movements in the rat, serves as a pharmacological model of human tardive dyskinesia[3]. Fluphenazine decanoate dihydrochloride (1, 2, 3 mg/kg/d; s.c.; 60 d) shows antifertility effects and induces hyperprolactinemia concomitant with gonadotropin suppression in adult male rat[4]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Cebus apella monkey[2]
Dosage:	0.22 mg/kg and followed by 0.33 mg/kg
Administration:	Intramuscular injection; 8 times per 3 weeks; 0.22 mg/kg for 63 weeks and 0.33 mg/kg for 6 weeks
Result:	Decreased the aggressiveness composite behavioral variables (CBV). Resulted stereotypic behavior induced by agonist and decreased prolactin response to AMPH.

Animal Model:	Male Sprague-Dawley rats (250 g)[3]
Dosage:	25 mg/kg

Administration:	Intramuscular injection into the hind limb; 24 weeks
Result:	Resulted in spontaneous vacuous chewing mouth movements and jaw tremor.

Animal Model:	Adult male rats[4]
Dosage:	1, 2, 3 mg/kg/d
Administration:	Subcutaneous injection between 10:00-12:00 h; 60 days
Result:	Increased serum prolactin level and suppressed serum LH and FSH levels at day 60. Increased hypothalamic tyrosine hydroxylase levels, enhanced chromatin decondensation, and resulted DNA denaturation.

REFERENCES

[1]. Goodwin DG, et al. Evaluation of five antischizophrenic agents against Toxoplasma gondii in human cell cultures. J Parasitol. 2011 Feb;97(1):148-51.

[2]. Lifshitz K, et al. Effects of dopamine agonists on Cebus apella monkeys with previous long-term exposure to fluphenazine. Biol Psychiatry. 1997 Mar 15;41(6):657-67.

[3]. Stoessl AJ, et al. Chronic neuroleptic-induced mouth movements in the rat: suppression by CCK and selective dopamine D1 and D2 receptor antagonists. Psychopharmacology (Berl). 1989;98(3):372-9.

[4]. Gill-Sharma MK, et al. Antifertility effects of fluphenazine in adult male rats. J Endocrinol Invest. 2003 Apr;26(4):316-26.

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