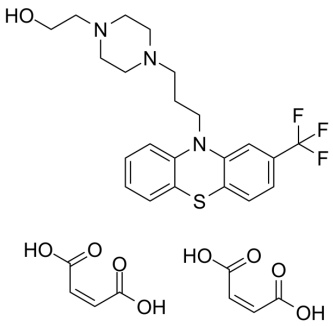
Fluphenazine dimaleate

Cat. No.:	HY-119980A
CAS No.:	3093-66-1
Molecular Formula:	$C_{30}H_{34}F_3N_3O_9S$
Molecular Weight:	669.67
Target:	Dopamine Receptor; Sodium Channel; SARS-CoV
Pathway:	GPCR/G Protein; Neuronal Signaling; Membrane Transporter/Ion Channel; Anti-infection
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

Fluphenazine dimaleate is a potent, orally active phenothiazine-based dopamine receptor antagonist. Fluphenazine dimaleate blocks neuronal voltage-gated sodium channels. Fluphenazine dimaleate acts primarily through antagonism of postsynaptic dopamine-2 receptors in mesolimbic, nigrostriatal, and tuberoinfundibular neural pathways. Fluphenazine dimaleate can antagonize Methylphenidate-induced stereotyped gnawing and inhibit climbing behaviour in mice. Fluphenazine dimaleate can be used for researching psychosis and painful peripheral neuropathy associated with diabetes and has potential to inhibit SARS-CoV-2[1][2][3][4][6].

IC_{50} & Target

Dopamine receptor, Sodium channels, SARS-CoV-2[1][2]

In Vivo

Fluphenazine (1 mg/kg; IG, treated from day 6 to day 15 of gestation) causes malformations in pregnant mice[5].

Fluphenazine (0.125-1 mg/kg; IP, single dosage) antagonizes Methylphenidate-induced stereotyped gnawing; inhibits significantly climbing behaviour[6].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Mature female Swiss-Webster mice[5]
Dosage:	1 mg/kg
Administration:	IG, treated from day 6 to day 15 of gestation
Result:	Significantly reduced fetal weight and length, increased the incidence of incomplete ossification of sternebrae and skull bones.

Animal Model:	Mice (injected with 60 mg/kg Methylphenidate)[6]
Dosage:	0.125, 0.25, 0.5, and 1 mg/kg
Administration:	IP, single dosage
Result:	Antagonized Methylphenidate-induced stereotyped gnawing; inhibited significantly climbing behaviour in mice at 0.0625-0.5 mg/kg, and at the dose of 1 mg/kg abolished this effect completely.

REFERENCES

[1]. Zhou X, et al. The neuroleptic drug, fluphenazine, blocks neuronal voltage-gated sodium channels. Brain Res. 2006 Aug 23;1106(1):72-81.

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[4]. Davis JL, et al. Peripheral diabetic neuropathy treated with amitriptyline and fluphenazine. JAMA. 1977 Nov 21;238(21):2291-2.

[5]. Abdel-Hamid HA, et al. Teratogenic effect of diphenylhydantoin and/or fluphenazine in mice. J Appl Toxicol. 1996 May-Jun;16(3):221-5.

[6]. Langwiński R, Niedzielski J. Narcotic analgesics and stereotyped behaviour in mice. Naunyn Schmiedebergs Arch Pharmacol. 1980 Jul;312(3):225-7.

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