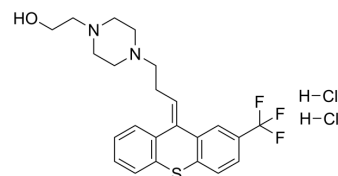


Flupentixol dihydrochloride

Cat. No.:	HY-15856B
CAS No.:	2413-38-9
Molecular Formula:	C ₂₃ H ₂₇ Cl ₂ F ₃ N ₂ OS
Molecular Weight:	507.44
Target:	Dopamine Receptor; PI3K; Apoptosis
Pathway:	GPCR/G Protein; Neuronal Signaling; PI3K/Akt/mTOR; Apoptosis
Storage:	4°C, sealed storage, away from moisture and light * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture and light)



SOLVENT & SOLUBILITY

In Vitro	H ₂ O : 100 mg/mL (197.07 mM; Need ultrasonic) DMSO : 33.33 mg/mL (65.68 mM; Need ultrasonic)				
	Preparing Stock Solutions	<div>Mass Solvent Concentration</div>	1 mg	5 mg	10 mg
		1 mM	1.9707 mL	9.8534 mL	19.7068 mL
		5 mM	0.3941 mL	1.9707 mL	3.9414 mL
		10 mM	0.1971 mL	0.9853 mL	1.9707 mL
Please refer to the solubility information to select the appropriate solvent.					
In Vivo	1. Add each solvent one by one: PBS Solubility: 50 mg/mL (98.53 mM); Clear solution; Need ultrasonic				
	2. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 2.5 mg/mL (4.93 mM); Clear solution				
	3. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (4.93 mM); Clear solution				
	4. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.5 mg/mL (4.93 mM); Clear solution				

BIOLOGICAL ACTIVITY

Description	Flupentixol is an orally active D ₁ /D ₂ dopamine receptor antagonist and new PI3K inhibitor (PI3Kα IC ₅₀ =127 nM). Flupentixol shows anti-proliferative activity to cancer cells and induces apoptosis. Flupentixol can also be used in schizophrenia, anxiolytic and depressive research ^{[1][2][3]} .		
IC ₅₀ & Target	PI3Kα	D ₁ Receptor	D ₂ Receptor

	127 nM (IC ₅₀)		
In Vitro	Flupentixol (2.5-40 μM; 72 h) treatment inhibits the viability of lung cancer cells in a dose-dependent manner ^[3] . Flupentixol (2.5-40 μM; 24 h) induces apoptosis in lung cancer cells ^[3] . Flupentixol (2.5-15 μM; 24 h) inhibits p-AKT and Bcl-2 expression levels ^[3] . MCE has not independently confirmed the accuracy of these methods. They are for reference only. Cell Viability Assay ^[3]		
	Cell Line:	A549, H661, SK-SEM-1, and NCAL-H520 cells	
	Concentration:	2.5, 5, 10, 20, or 40 μM	
	Incubation Time:	72 hours	
	Result:	Showed the IC ₅₀ s of 5.708 μM and 6.374 μM for A549 and H661 cells, respectively.	
	Apoptosis Analysis ^[3]		
	Cell Line:	A549 and H661 cells	
	Concentration:	5, 10, 20 and 40 μM	
	Incubation Time:	24 hours	
	Result:	Increased the percentage of cells in early apoptosis compared with the negative control in both A549 and H661 (p<0.05). Induced the cleavage of PARP and caspase-3 in a dose-dependent manner.	
	Western Blot Analysis ^[3]		
	Cell Line:	A549 and H661 cells	
	Concentration:	2.5, 5, 10, and 15 μM	
	Incubation Time:	24 hours	
	Result:	Decreased AKT phosphorylation levels in a dose-dependent manner, decreased the expression levels of Bcl-2.	
In Vivo	Flupentixol (intragastric injection; 40 mg/kg; once daily; 21 d) suppresses A549 xenografted tumor growth in nude mice ^[3] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.		
	Animal Model:	BALB/C nude mice injected with A549 cells ^[3]	
	Dosage:	40 mg/kg	
	Administration:	Intragastric injection; 40 mg/kg; once daily; 21 days	
	Result:	Reduced tumor volumes compared to the vehicle control (p<0.05), reduced tumor weights by 64.1% (p<0.05).	

REFERENCES

[1]. Ruhrmann S, et al. Efficacy of flupentixol and risperidone in chronic schizophrenia with predominantly negative symptoms. Prog Neuropsychopharmacol Biol Psychiatry. 2007 Jun 30;31(5):1012-22.

[2]. Chao Dong, et al. The antipsychotic agent flupentixol is a new PI3K inhibitor and potential anticancer drug for lung cancer. *Int J Biol Sci.* 2019 Jun 2;15(7):1523-1532.

[3]. Yonar D, et al. Effect of cis-(Z)-flupentixol on DPPC membranes in the presence and absence of cholesterol. *Chem Phys Lipids.* 2016 Jun;198:61-71.

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA