Perphenazine-d_4

Cat. No.: HY-A0077S1

CAS No.: 155593-75-2

Molecular Formula: $C_{21}H_{22}D_4ClN_3OS$

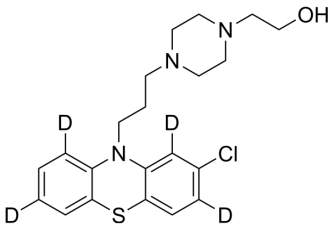
Molecular Weight: 407.99

Target: 5-HT Receptor; Adrenergic Receptor; Apoptosis; Autophagy; Dopamine Receptor; Histamine Receptor

Pathway: GPCR/G Protein; Neuronal Signaling; Apoptosis; Autophagy; Immunology/Inflammation

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	6 months
	-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (245.10 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.4510 mL	12.2552 mL	24.5104 mL
	5 mM	0.4902 mL	2.4510 mL	4.9021 mL
	10 mM	0.2451 mL	1.2255 mL	2.4510 mL

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description

Perphenazine-d_4 is the deuterium labeled Perphenazine. Perphenazine is a typical antipsychotic agent, inhibits 5-HT2Areceptor, Alpha-1A adrenergic receptor, Dopamine receptor D2/D3, D2L receptor, and Histamine H1 receptor, with Ki values of 5.6, 10, 0.765/0.13, 3.4, and 8 nM, respectively.

In Vitro

Stable heavy isotopes of hydrogen, carbon, and other elements have been incorporated into drug molecules, largely as tracers for quantitation during the drug development process. Deuteration has gained attention because of its potential to affect the pharmacokinetic and metabolic profiles of drugs[1].

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

REFERENCES

[1]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. Ann Pharmacother. 2019;53(2):211-216. ;Richtand NM, et al. Dopamine

and serotonin receptor binding and antipsychotic efficacy. Neuropsychopharmacology. 2007 Aug;32(8):1715-26.

[2]. Richtand NM, et al. Dopamine and serotonin receptor binding and antipsychotic efficacy. Neuropsychopharmacology. 2007 Aug;32(8):1715-26.

[3]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. Ann Pharmacother. 2019 Feb;53(2):211-216.

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