Thioridazine-d3 hydrochloride

Cat. No.: HY-B0965AS

CAS No.: 1189928-36-6

Molecular Formula: $C_{21}H_{24}D_3ClN_2S_2$

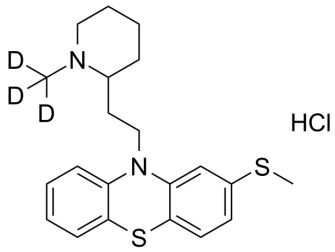
Molecular Weight: 410.05

Target: Dopamine Receptor; Apoptosis; Bacterial; Autophagy; 5-HT Receptor

Pathway: GPCR/G Protein; Neuronal Signaling; Apoptosis; Anti-infection; Autophagy

Storage:

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



BIOLOGICAL ACTIVITY

Description	Thioridazine-d_3 (hydrochloride) is the deuterium labeled Thioridazine. Thioridazine, an antagonist of the dopamine receptor D2 family proteins, exhibits potent anti-psychotic and anti-anxiety activities. Thioridazine is also a potent inhibitor of PI3K-Akt-mTOR signaling pathways with anti-angiogenic effect. Thioridazine shows antiproliferative and apoptosis induction effects in various types of cancer cells, with specificity on targeting cancer stem cells (CSCs)[1][2][3][4].
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.

[2]. Tschanz JT, et, al. Atypical antipsychotic drugs block selective components of amphetamine-induced stereotypy. Pharmacol Biochem Behav. 1988 Nov;31(3):519-22.

[3]. Mu J, et, al. Thioridazine, an antipsychotic drug, elicits potent antitumor effects in gastric cancer. Oncol Rep. 2014 May;31(5):2107-14.

[4]. Kang S, et, al. Thioridazine induces apoptosis by targeting the PI3K/Akt/mTOR pathway in cervical and endometrial cancer cells. Apoptosis. 2012 Sep;17(9):989-97.

[5]. Loehr AR, et, al. Targeting Cancer Stem Cells with Differentiation Agents as an Alternative to Genotoxic Chemotherapy for the Treatment of Malignant Testicular Germ Cell Tumors. Cancers (Basel). 2021 Apr 23;13(9):2045.

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