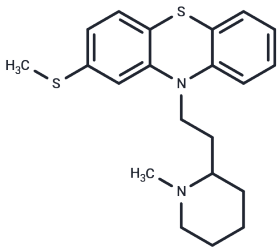
Data Sheet (Cat.No.T61476)

TargetMol

Thioridazine

Chemical Properties



CAS No. : 50-52-2

Formula: C21H26N2S2

Molecular Weight: 370.57

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Thioridazine is a chemical compound characterized by its potent anti-psychotic and anti-anxiety activities. As an antagonist of the dopamine receptor D2 family proteins, it exhibits a strong inhibitory effect on the PI3K-Akt-mTOR signaling pathways, resulting in anti-angiogenic effects. It also demonstrates significant antiproliferative and apoptosis induction effects in a diverse range of cancer cells, specifically targeting cancer stem cells (CSCs) [1] [2] [3] [4].
Targets(IC50)	Apoptosis,Others,5-HT Receptor,Antibacterial,Autophagy,Dopamine Receptor
In vitro	Thioridazine, within a concentration range of 0.01-100 μM over 48 hours, diminishes the viability of NCI-N87 and AGS gastric cancer cells in a concentration-dependent manner, as well as cervical (HeLa, Caski, and C33A) and endometrial (HEC-1-A and KLE) cancer cells at a concentration of 15 μM over 24 hours. At concentrations of 1-15 μM and durations of 24-48 hours, it triggers death in gastric cancer cells via the mitochondrial apoptosis pathway. Moreover, a 15 μM concentration of Thioridazine over 24 hours interferes with the PI3K/Akt signaling pathway, leading to G1 cell cycle arrest in cervical and endometrial cancer cells. It also effectively suppresses the proliferation of both antibiotic-sensitive and multidrug-resistant A. baumannii strains. Through cell viability assays and Western blot analyses, it has been demonstrated to induce cytotoxicity in gastric cancer cells by downregulating apoptosis-related proteins, including caspase-9, caspase-8, and caspase-3 precursors.
In vivo	Thioridazine, administered intraperitoneally (i.p.) at a dosage of 25 mg/kg every three days over a span of three weeks, significantly extends the lifespan of tumor-afflicted mice while diminishing the population of pluripotent embryonal carcinoma (EC) cells within the tumors [5]. Additionally, at doses ranging from 1.0 to 5.0 mg/kg administered subcutaneously (s.c.), Thioridazine effectively mitigates oral behavior and specifically inhibits repetitive head bobbing [1]. In studies using Nude and Rag2KO mice injected with iPS cells or NT2D1 cells [5], this treatment regimen not only reduced the presence of OCT4-expressing cells in malignant teratocarcinomas but also increased the survival rates of the tumor-bearing mice, without impacting fertility.

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.6985 mL	13.4927 mL	26.9855 mL
5 mM	0.5397 mL	2.6985 mL	5.3971 mL
10 mM	0.2699 mL	1.3493 mL	2.6985 mL
50 mM	0.054 mL	0.2699 mL	0.5397 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481