Data Sheet (Cat.No.T212775)

TargetMol

Dichloro(bipyridine)platinum

Chemical Properties

CAS No. : 13965-31-6

Formula: C10H8Cl2N2Pt

Molecular Weight: 422.174

Storage: Keep away from direct sunlight,The compound is unstable in solution. Please use soon
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	Dichloro(bipyridine)platinum is a potent platinum-based antitumor complex and a structural analogue of cisplatin. The incorporation of the bipyridine ligand enhances its lipophilicity and planar stacking ability. The compound interacts with DNA through covalent binding or intercalation, forming cis-Pt-DNA adducts that disrupt DNA replication and transcription. Research indicates that such complexes effectively activate pro-apoptotic signaling pathways and exhibit significant growth inhibition across various cancer cell lines, including those resistant to cisplatin. It serves as a foundational scaffold for developing next-generation metallodrugs in oncology.
Targets(IC50)	DNA

Solubility Information

Solubility	DMSO: Slightly soluble,DMSO inactivates the activity of Dichloro(bipyridine)platinum. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.3687 mL	11.8436 mL	23.6871 mL
5 mM	0.4737 mL	2.3687 mL	4.7374 mL
10 mM	0.2369 mL	1.1844 mL	2.3687 mL
50 mM	0.0474 mL	0.2369 mL	0.4737 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.

Reference

Vo V, Kabuloglu-Karayusuf Z G, Carper S W, et al. Novel 4, 4′-diether-2, 2′-bipyridine cisplatin analogues are more effective than cisplatin at inducing apoptosis in cancer cell lines[J]. Bioorganic & medicinal chemistry, 2010, 18(3): 1163-1170.

Läer S, et al. Receptor mechanisms involved in the 5-HT-induced inotropic action in the rat isolated atrium. British journal of pharmacology. 1998 Mar;123(6):1182-8.

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