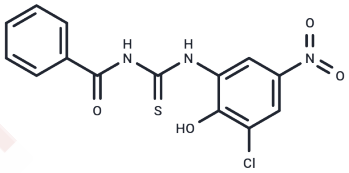
Data Sheet (Cat.No.T23163)

PIT-1

Chemical Properties



CAS No. : 53501-41-0

Formula: C14H10ClN3O4S

Molecular Weight: 351.77

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	PIT-1 is a selective PIP3 antagonist that inhibits cancer cell survival and induces apoptosis by inhibiting PIP3-dependent PI3K/Akt signalling and the PH structural domain of Akt.
Targets(IC50)	Apoptosis,Others,Akt,PI3K
In vitro	In breast cancer cell lines such as MCF-7, PIT-1 (10-100μM, 24-48h) induces apoptosis, reduces cell viability, and significantly downregulates the expression of Pit-1 target genes, including GH, PRL, and GHRHR. Additionally, PIT-1 upregulates pro-apoptotic genes such as Bax and activates caspase-3, suggesting PIT-1 induces apoptosis through a mitochondrial pathway[1].
In vivo	In a breast cancer xenograft model using nude mice, PIT-1 (intraperitoneal injection) significantly inhibited tumor growth, reducing tumor volume by approximately 60% compared to the control group, with no apparent toxicity[1].

Solubility Information

Solubility	DMSO: 50 mg/mL (142.14 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.8428 mL	14.2138 mL	28.4277 mL
5 mM	0.5686 mL	2.8428 mL	5.6855 mL
10 mM	0.2843 mL	1.4214 mL	2.8428 mL
50 mM	0.0569 mL	0.2843 mL	0.5686 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

Miao B, et al. Small molecule inhibition of phosphatidylinositol-3,4,5-triphosphate (PIP3) binding to pleckstrin homology domains. Proc Natl Acad Sci U S A. 2010 Nov 16;107(46):20126-31.