

Perifosine

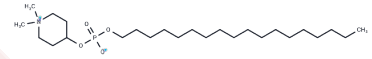
Chemical Properties

CAS No. : 157716-52-4

Formula: C₂₅H₅₂N₂O₄P

Molecular Weight: 461.66

Storage: Keep away from moisture, Store at low temperature,
Store under nitrogen
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	Perifosine (KRX-0401) is an oral-active, alkyl-phosphocholine Akt inhibitor with potential antineoplastic activity.
Targets(IC50)	Apoptosis,Akt,Autophagy
In vitro	In MM.1S cells, Perifosine (10 μM) completely inhibited Akt phosphorylation. In immortalized keratinocytes and head and neck squamous carcinoma cells (IC ₅₀ =0.6-8.9 μM), Perifosine inhibited cell proliferation. In mouse glial progenitor cells, Perifosine induced cell cycle arrest at G1 and G2 by reducing the phosphorylation level of Akt and extracellular signal-regulated kinases, causing cell growth inhibition. In human hepatocellular carcinoma cells, Perifosine induced cell cycle arrest and apoptosis by blocking Akt phosphorylation.
In vivo	In MM.1S cells, Perifosine (10 μM) completely inhibited Akt phosphorylation. In immortalized keratinocytes and head and neck squamous carcinoma cells (IC ₅₀ =0.6-8.9 μM), Perifosine inhibited cell proliferation. In mouse glial progenitor cells, Perifosine induced cell cycle arrest at G1 and G2 by reducing the phosphorylation level of Akt and extracellular signal-regulated kinases, causing cell growth inhibition. In human hepatocellular carcinoma cells, Perifosine induced cell cycle arrest and apoptosis by blocking Akt phosphorylation.
Kinase Assay	Akt kinase assay: MM.1S cells are cultured in the presence or absence of perifosine (5 μM, 6 hours) and then stimulated with IL-6 (20 ng/mL, 10 minutes). In vitro akt kinase assay is then carried out using the Akt Kinase Assay Kit.
Cell Research	Cells are incubated in the medium with 10% FCS for 48 hours with indicated concentration of Periosine. Cell viability is determined by 3-(4,5-dimethylthiazol-2-yl)-2,5-diphenyltetrazolium bromide (MTT) assay. (Cell Proliferation Kit I; Roche). The absorbance at 590 nm is recorded using the 96-well plate reader.(Only for Reference)

Solubility Information

Solubility	DMSO: Insoluble, H ₂ O: 10 mM,Sonication is recommended.
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A DRUG SCREENING EXPERT

Solubility	(< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.1661 mL	10.8305 mL	21.661 mL
5 mM	0.4332 mL	2.1661 mL	4.3322 mL
10 mM	0.2166 mL	1.083 mL	2.1661 mL
50 mM	0.0433 mL	0.2166 mL	0.4332 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

Vyomesh Patel, et al. Cancer Res, 2002, 62(5), 1401-1409

Zhang Q, Qian Y, Ren Y, et al. Phenethyl isothiocyanate inhibits metastasis potential of non-small cell lung cancer cells through FTO mediated TLE1 m6A modification. Acta Pharmacologica Sinica. 2023: 1-14.

Momota H, et al. Cancer Res, 2005, 65(16), 7429-7435.

Hideshima T, et al. Blood, 2006, 107(10), 4053-4062.

Fei HR, et al. Cytotechnology, 2010, 62(5), 449-460

Catley L, et al. Exp Hematol, 2007, 32(7), 1038-1046

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