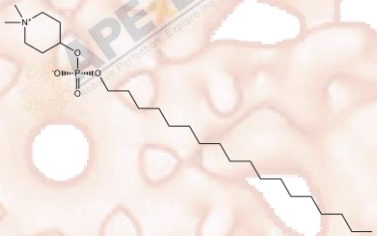
Product Data Sheet

Perifosine



Cat. No.:	A8309
CAS No.:	157716-52-4
Formula:	C25H52NO4P
M.Wt:	461.67
Synonyms:	NSC639966;KRX-0401;KRX0401;D-21266;D 21266
Target:	PI3K/Akt/mTOR Signaling
Pathway:	Akt
Storage:	Store at -20°C

Solvent & Solubility

In Vitro

insoluble in DMSO; ⩾5.55 mg/mL in EtOH with ultrasonic; ⩾5.94 mg/mL in H2O with ultrasonic

Preparing Stock Solutions

Mass / Solvent / Concentration	1mg	5mg	10mg
1 mM	2.1660 mL	10.8302 mL	21.6605 mL
5 mM	0.4332 mL	2.1660 mL	4.3321 mL
10 mM	0.2166 mL	1.0830 mL	2.1660 mL

Please refer to the solubility information to select the appropriate solvent.

Biological Activity

Shortsummary	Akt inhibitor
IC_{50} & Target	4.7 μM (AKT)

In Vitro

Cell Viability Assay

Cell Line:	CRW22RV1 cells
Preparation method：	The solubility of this compound in DMSO is
Reacting conditions:	10 μM, 24 hours
Applications:	To assess the effect of perifosine on radiation-induced apoptosis, the

		Annexin-FITC based flow cytometry analysis was used. Both nuclear fragmentations with PI staining and translocated membrane phosphatidylserine (PS) with Annexin V staining were measured. Both perifosine and radiation induced significant apoptotic responses as shown by the increase of apoptotic cells. When radiation (6Gy) and perifosine (10 μM) were combined, the number of apoptotic cells was significantly increased. Perifosine alone did not induce cell cycle arrest at the G2/M phases and perifosine did not affect the IR-induced G2/M checkpoint.
In Vivo	**Animal experiment**	
	Animal models:	Male Athymic Nude-Foxn1nu mice injected with CRW22RV1 cells
	Dosage form:	Oral administration, in a loading dose of 300 mg/kg (2 × 150 mg/kg separated by 12 hours) followed by daily maintenance doses of 35 mg/kg for 5 days
	Applications:	Mice were separated into 4 groups: control, perifosine, radiotherapy and combined therapy. Perifosine alone did not have a significant effect on tumor growth. However, perifosine can significantly increase radiation induced tumor growth delay. To reach the 10-fold size of tumor volume to the initial volume in the control, it took 15, 19, 41 and 59 days in control, perifosine only, radiation only and combined treatment groups, respectively. It is noted that the combined treatment led to a complete remission of the CWR22RV1 tumor.
	Other notes:	Please test the solubility of all compounds indoor, and the actual solubility may slightly differ with the theoretical value. This is caused by an experimental system error and it is normal.

Product Citations

1. Chen H, Wang X, et al. "AKT andits related molecular feature in aged mice skin." PLoS One. 2017 Jun 7;12(6):e0178969.PMID:28591208

See more customer validations on www.apexbt.com.

References

[1] Gao Y, Ishiyama H, Sun M, et al. The alkylphospholipid, perifosine, radiosensitizes prostate cancer cells both in vitro and in vivo. Radiation oncology (London, England), 2011, 6: 39.

Caution

FOR RESEARCH PURPOSES ONLY.

NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

Specific storage and handling information for each product is indicated on the product datasheet. Most APExBIO products are stable

under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Shortterm storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.

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