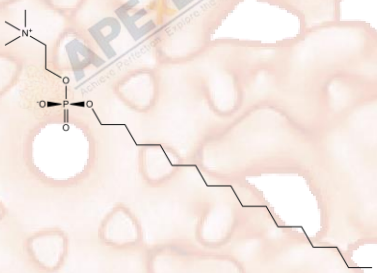
Product Data Sheet

Miltefosine



Cat. No.:	B1371
CAS No.:	58066-85-6
Formula:	C21H46NO4P
M.Wt:	407.57
Synonyms:	
Target:	PI3K/Akt/mTOR Signaling
Pathway:	Akt
Storage:	Store at -20°C

Solvent & Solubility

In Vitro

⩾10.2 mg/mL in H2O; ⩾2.115 mg/mL in DMSO with gentle warming and ultrasonic; ⩾49.7 mg/mL in EtOH

Preparing Stock Solutions

Mass / Solvent / Concentration	1mg	5mg	10mg
1 mM	2.4536 mL	12.2678 mL	24.5357 mL
5 mM	0.4907 mL	2.4536 mL	4.9071 mL
10 mM	0.2454 mL	1.2268 mL	2.4536 mL

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

Biological Activity

Shortsummary	PI3K/Akt inhibitor
IC_{50} & Target	

In Vitro

Cell Viability Assay

Cell Line:	L6E9 rat skeletal muscle cell line
Preparation method:	The solubility of this compound in DMSO is limited. General tips for obtaining a higher concentration: Please warm the tube at 37 °C for 10 minutes and/or shake it in the ultrasonic bath for a while. Stock solution can be stored below -20 °C for several months.
Reacting conditions:	10, 20, 40 or 60 μM; 15, 30, 45 or 60 mins

	Applications:	In L6E9 rat skeletal muscle cell line, Miltefosine dose-dependently inhibited insulin-stimulated Akt/PKB phosphorylation, with 75% inhibition at 40 μM and 98% inhibition at 60 μM. Besides, Miltefosine (40 μM for 60 mins) pre-treatment also inhibited insulin-stimulated activation of PI3K, without significant effect on cell survival, cell number, protein content or cell morphology.
In Vivo	**Animal experiment**	
	Animal models:	BC-1 cell-xenografted NOD-SCID mice
	Dosage form:	50 mg/kg; i.p.; 5 days a week, for 20 days
	Applications:	Compared with vehicle-treated mice, Miltefosine showed inhibition on the growth rate of tumors. By day 14 after treatment, there was an approximately 50% decrease in the average tumor volume of Miltefosine-treated mice. Immunohistochemical analyses of tumor sections from Miltefosine-treated mice displayed reduced phosphorylation of ribosomal S6 protein which correlated with the delay in tumor progression in the treatment group.
	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

See more customer validations on www.apexbt.com.

References

[1]. Verma, N.K. and C.S. Dey, The anti-leishmanial drug miltefosine causes insulin resistance in skeletal muscle cells in vitro. Diabetologia, 2006. 49(7): p. 1656-60.

[2]. Bhatt AP, Bhende PM, Sin SH, Roy D, Dittmer DP, Damania B. Dual inhibition of PI3K and mTOR inhibits autocrine and paracrine proliferative loops in PI3K/Akt/mTOR-addicted lymphomas. Blood. 2010 Jun 3;115(22):4455-63.

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.

APExBIO Technology
www.apexbt.com
7505 Fannin street, Suite 410, Houston, TX 77054.
Tel: +1-832-696-8203 | Fax: +1-832-641-3177 | Email: info@apexbt.com