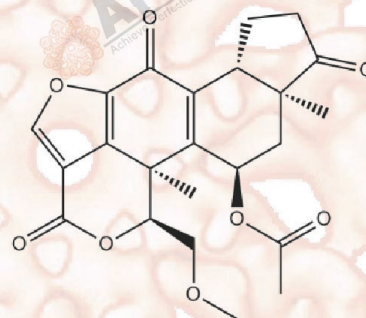


Product Data Sheet

Wortmannin

Cat. No.:	A8544
CAS No.:	19545-26-7
Formula:	C ₂₃ H ₂₄ O ₈
M.Wt:	428.43
Synonyms:	
Target:	Ubiquitination/ Proteasome
Pathway:	Autophagy
Storage:	Store at -20°C



Solvent & Solubility

≥21.42 mg/mL in DMSO; insoluble in H₂O; insoluble in EtOH

In Vitro

Preparing Stock Solutions	Solvent	Mass Concentration	1mg	5mg	10mg
			1mM	5mM	10mM
			2.3341 mL	11.6705 mL	23.3410 mL
			0.4668 mL	2.3341 mL	4.6682 mL
			0.2334 mL	1.1671 mL	2.3341 mL

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

Biological Activity

Shortsummary

PI3K inhibitor, selective and irreversible

IC₅₀ & Target

3 nM (PI3K), 16 nM (DNA-PK), 150 nM (ATM), 170 nM (MLCK), 1.8 μM (ATR)

In Vitro

Cell Viability Assay

Cell Line: v-sis NIH 3T3 cells

Preparation method:

The solubility of this compound in DMSO is > 21.4 mg/mL. 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:

1.3 μM

	Applications:	In PDGF-stimulated v-sis NIH 3T3 cells, Wortmannin almost completely inhibited the formation of PtdIns-3-phosphates. However, in resting cells, Wortmannin showed no effect on the pattern of phospholipids.
In Vivo	Animal experiment	
	Animal models:	Immunodeficient mice bearing orthotopic human pancreatic cancer xenografts
	Dosage form:	0 ~ 0.7 mg/kg; i.v.; 0 ~ 4 hrs
	Applications:	In orthotopic human pancreatic cancer xenografts, PKB/Akt phosphorylation was inhibited by Wortmannin in a time- and dose-dependent manner, and reached a plateau at 4 hrs and at 0.7 mg/kg. Meanwhile, the levels of PKB/Akt phosphorylation were decreased maximally by ~ 50%.
	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

- Ming K, Yuan W, et al. "PI3KC3-dependent autophagosomes formation pathway is of crucial importance to anti-DHAV activity of Chrysanthemum indicum polysaccharide." Carbohydr Polym. 2019 Mar 15;208:22-31.PMID:30658794
- Yuan W, Deng D, et al. "Hyperresponsiveness to interferon gamma exposure as a response mechanism to anti-PD-1 therapy in microsatellite instability colorectal cancer." Cancer Immunol Immunother. 2018 Nov 7.PMID:30406373
- Wang H, Liu W, et al. "Inhibitor analysis revealed that clathrin-mediated endocytosis is involved in cellular entry of type III grass carp reovirus." Virol J. 2018 May 24;15(1):92.PMID:29793525
- Jie Wu, Pingfan Guo, et al. "Glucagon-like peptide-1 affects human umbilical vein endothelial cells in high glucose by the PI3K/Akt/eNOS signaling pathway." Turk J Biochem. 2017 09 11.
- Caster JM, Yu SK, et al. "Effect of particle size on the biodistribution, toxicity, and efficacy of drug-loaded polymeric nanoparticles in chemoradiotherapy." Nanomedicine. 2017 Mar 11. pii: S1549-9634(17)30044-8.PMID:28300658

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References

- [1]. Powis G, Bonjouklian R, Berggren M M, et al. Wortmannin, a potent and selective inhibitor of phosphatidylinositol-3-kinase. Cancer Research, 1994, 54(9): 2419-2423.
- [2]. Ng SS, Tsao MS, Nicklee T, Hedley DW. Wortmannin inhibits pkb/akt phosphorylation and promotes gemcitabine antitumor activity in orthotopic human pancreatic cancer xenografts in immunodeficient mice. Clin Cancer Res. 2001 Oct;7(10):3269-75.

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 APEX BIO 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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