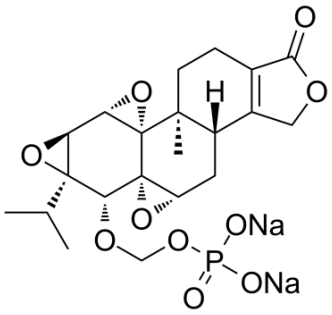
Minnelide

Cat. No.:	HY-124584
CAS No.:	1254702-87-8
Molecular Formula:	$C_{21}H_{25}Na_2O_{10}P$
Molecular Weight:	514.37
Target:	Apoptosis
Pathway:	Apoptosis
Storage:	Please store the product under the recommended conditions in the COA.



BIOLOGICAL ACTIVITY

Description

Minnelide is a prodrug of triptolide that shows potent **antitumor** activity in a number of tumor types, particularly in pancreatic cancer. Minnelide causes **apoptotic**[1].

In Vitro

Minnelide (0-200 nM; 48 hours) shows significantly decreased cell viability in pancreatic cancer cell lines after treatment in the presence, but not in the absence, of phosphatase[2].

Cell Viability Assay[2]

Cell Line:	Pancreatic cancer cell line: S2-013, MIA PaCa-2, S2-VP10, and Panc-1 cells
Concentration:	0.100 nM, 200 nM
Incubation Time:	48 hours
Result:	Decreased cell viability of in vitro.

In Vivo

Minnelide (injection intraperitoneally; 0.1-0.6 mg/kg; once daily or twice daily) leads to a marked decrease in tumor weight and volume at the end of treatment and increases survival in orthotopic model of pancreatic cancer with MIA PaCa-2–derived human pancreatic tumors[2].

Minnelide (injection intraperitoneally; 0.42 mg/kg; once daily; 28 days) prevents locoregional spread and leads to a decrease in average tumor weight in a xenograft model of pancreatic cancer with metastatic S2-013 cells[2].

Minnelide (injection intraperitoneally; 0.42 mg/kg, 0.21 mg/kg; once daily) causes tumor regression and tumors from Minnelide-treated animals showed fibrosis and the presence of pyknotic nuclei in human pancreatic cancer xenografts in SCID mice[2].

Animal Model:	Orthotopic model of pancreatic cancer with MIA PaCa 2-derived human pancreatic tumors in athymic nude mice[2]
Dosage:	0.1-0.6 mg/kg
Administration:	Injection intraperitoneally; 0.1-0.6 mg/kg; once daily or twice daily
Result:	Prevented pancreatic tumor growth in vivo.

Animal Model:	Xenograft model of pancreatic cancer with metastatic S2-013 cell line in athymic nude mice[2]
Dosage:	0.42 mg/kg
Administration:	Injection intraperitoneally; 0.42 mg/kg; once daily
Result:	Prevented extensive spread from the primary site of injection.

Animal Model:	Human pancreatic cancer xenografts in SCID mice[2]
Dosage:	0.21 mg/kg, 0.42 mg/kg
Administration:	Injection intraperitoneally; 0.42 mg/kg; once daily
Result:	Reduced tumor burden in human xenografts from patients.

REFERENCES

[1]. Noel P□et al. Triptolide and Its Derivatives as Cancer Therapies. Trends Pharmacol Sci. 2019 May;40(5):327-341.

[2]. Chugh R, et al. A preclinical evaluation of Minnelide as a therapeutic agent against pancreatic cancer. Sci Transl Med. 2012 Oct 17;4(156):156ra139.

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