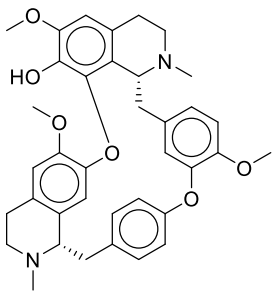
Product data sheet

MedKoo Cat#: 598885 Name: Fangchinoline CAS#: 33889-68-8 Chemical Formula: $C_{37}H_{40}N_2O_6$ Exact Mass: 608.2886 Molecular Weight: 608.73	
Product supplied as:	Powder
Purity (by HPLC):	≥ 98%
Shipping conditions	Ambient temperature
Storage conditions:	Powder: -20°C 3 years; 4°C 2 years.
	In solvent: -80°C 3 months; -20°C 2 weeks.

1. Product description:
Fangchinoline is an isolate from Stephania Tetrandra that shows anti-cancer activity. It inhibits breast adenocarcinoma proliferation through apoptosis induction. In addition, it has been shown to inhibit HIV-Type 1 replication.

2. CoA, QC data, SDS, and handling instruction
SDS and handling instruction, CoA with copies of QC data (NMR, HPLC and MS analytical spectra) can be downloaded from the product web page under "QC And Documents" section. Note: copies of analytical spectra may not be available if the product is being supplied by MedKoo partners. Whether the product was made by MedKoo or provided by its partners, the quality is 100% guaranteed.

3. Solubility data

Solvent	Max Conc. mg/mL	Max Conc. mM
DMSO	100.0	164.28
Ethanol	5.0	8.21

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	1.64 mL	8.21 mL	16.43 mL
5 mM	0.33 mL	1.64 mL	3.29 mL
10 mM	0.16 mL	0.82 mL	1.64 mL
50 mM	0.03 mL	0.16 mL	0.33 mL

5. Molarity Calculator, Reconstitution Calculator, Dilution Calculator
Please refer the product web page under section of "Calculator"

6. Recommended literature which reported protocols for in vitro and in vivo study
In vitro study

1. Zhang Y, Wang S, Chen Y, Zhang J, Yang J, Xian J, Li L, Zhao H, Hoffman RM, Zhang Y, Jia L. Fangchinoline Inhibits Human Esophageal Cancer by Transactivating ATF4 to Trigger Both Noxa-Dependent Intrinsic and DR5-Dependent Extrinsic Apoptosis. Front Oncol. 2021 Jun 14;11:666549. doi: 10.3389/fonc.2021.666549. PMID: 34195076; PMCID: PMC8236818.
2. Jiang F, Ren S, Chen Y, Zhang A, Zhu Y, Zhang Z, Li Z, Piao D. Fangchinoline exerts antitumour activity by suppressing the EGFR-PI3K/AKT signalling pathway in colon adenocarcinoma. Oncol Rep. 2021 Jan;45(1):139-150. doi: 10.3892/or.2020.7857. Epub 2020 Nov 18. PMID: 33416119; PMCID: PMC7709815.

In vivo study

1. Bao K, Li Y, Wei J, Li R, Yang J, Shi J, Li B, Zhu J, Mao F, Jia R, Li J. Fangchinoline suppresses conjunctival melanoma by directly binding FUBP2 and inhibiting the homologous recombination pathway. Cell Death Dis. 2021 Apr 7;12(4):380. doi: 10.1038/s41419-021-03653-4. PMID: 33828201; PMCID: PMC8027391.
2. Xiang X, Tian Y, Hu J, Xiong R, Bautista M, Deng L, Yue Q, Li Y, Kuang W, Li J, Liu K, Yu C, Feng G. Fangchinoline exerts anticancer effects on colorectal cancer by inducing autophagy via regulation AMPK/mTOR/ULK1 pathway. Biochem Pharmacol. 2021 Apr;186:114475. doi: 10.1016/j.bcp.2021.114475. Epub 2021 Feb 18. PMID: 33609560.

7. Bioactivity

Product data sheet

Biological target:

(R)-Fangchinoline (Thalrugosine), a alkaloids from genus Stephania，exhibits antimicrobial and hypotensive activity.

In vitro activity

PI and Annexin-V-FITC staining analysis confirmed that the number of Annexin V-positive cells (apoptosis marker) increased significantly after FCL (fangchinoline) treatment (Figures 3A, B). Furthermore, FCL-treated ESCC cells had increased levels of cleaved PARP, a classical marker of apoptosis (Figure 3C). Therefore, these findings demonstrated that FCL triggered apoptosis in ESCC cells.

Reference: Front Oncol. 2021; 11: 666549. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8236818/

In vivo activity

As shown in Fig. 1C, the CM-AS16 tumour growth was significantly inhibited after intraperitoneal (i.p.) treatment of the NCG male mice with fangchinoline at a dosage of 50 mg/kg/day compared to the control group ($p < 0.01$).

Reference: Cell Death Dis. 2021 Apr; 12(4): 380. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8027391/

Note: The information listed here was extracted from literature. MedKoo has not independently retested and confirmed the accuracy of these methods. Customer should use it just for a reference only.