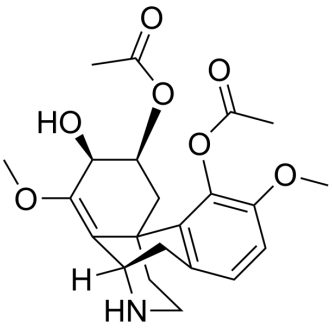
FK-3000

Cat. No.:	HY-N11097
CAS No.:	1054312-81-0
Molecular Formula:	$C_{22}H_{27}NO_7$
Molecular Weight:	417.45
Target:	Apoptosis; HSV; HIV
Pathway:	Apoptosis; Anti-infection
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	FK-3000 is a potent anti-tumor agent that inhibits the growth of carcinoma cells through apoptosis and induction cell cycle arrest. FK-3000 also exhibit antiviral effects against HSV-1 and HIV-1[1][2][3][4].
In Vitro	FK-3000 (0-5 μg/mL; 48 h) inhibits cell proliferation, with IC_{50}s of 0.52, 0.77, 0.22, 2.70, 0.40, and 1.90 μg/mL for MDA-MB-231, MCF-7, PC-3, A-431, HT-29, and CT-26 cells, respectively[1]. FK-3000 (0.5-5.0 μg/mL; 24-48 h) induces MDA-MB-231 cell apoptosis in a dose- and time-dependent manner[1]. FK-3000 (0.5-5.0 μg/mL; 24-48 h) induces G_2/M phase arrest in MDA-MB-231 and MCF-7 cells in a dose- and time-dependent manner[2]. FK-3000 (0.5-5.0 μg/mL; 60-120 min or 24-48 h) reduces NF-κB phosphorylation levels and COX-2 expression in MDA-MB-231 cells[1]. FK-3000 (5.0 μg/mL; 120 min) effectively blocks NF-κB translocation from cytoplasm to nucleus in MDA-MB-231 cells[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	FK-3000 (1 mg/kg/day; i.p. daily for 24 d) inhibits tumor growth and shows no signs of toxicity in an MDA-MB-231 xenografted mouse model[1]. FK-3000 (10-25 mg/kg; p.o. for 10 d) significantly delays skin lesion, limits the development of further lesions and prolongs the mean survival time of HSV-1 infected mice[3]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Xu HD, et, al. FK-3000 isolated from Stephania delavayi Diels. inhibits MDA-MB-231 cell proliferation by decreasing NF-κB phosphorylation and COX-2 expression. Int J Oncol. 2015;46(6):2309-16.

[2]. Li YC, et, al. 6,7-di-O-acetylsinococuline (FK-3000) induces G2/M phase arrest in breast carcinomas through p38 MAPK phosphorylation and CDC25B dephosphorylation. Int J Oncol. 2015 Feb;46(2):578-86.

[3]. Nawawi A, et, al. In vivo antiviral activity of Stephania cepharantha against herpes simplex virus type-1. Phytother Res. 2001 Sep;15(6):497-500.

[4]. Lee JH, et, al. Development of a LC-MS method for quantification of FK-3000 and its application to in vivo pharmacokinetic study in drug development. J Pharm Biomed Anal. 2012 Nov;70:587-91.

Caution: Product has not been fully validated for medical applications. For research use only.

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