Cepharanthine

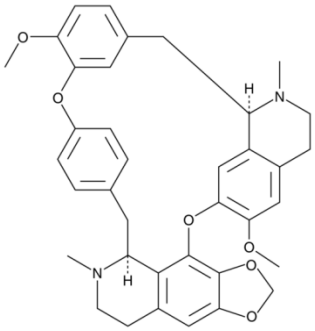
06/20

ALTERNATE NAMES: O-Methylcepharanoline; (14S,27R)-22,33-dimethoxy-13,28-dimethyl-2,5,7,20-tetraoxa-13,28-diazaoctacyclo[25.6.2.2^{16,19}.1^{3,10}.1^{21,25}.0^{4,8}.0^{31,35}.0^{14,39}]nonatriaconta-1(33),3(39),4(8),9,16(38),17,19(37),21,23,25(36),31,34-dodecaene; 6',12'-Dimethoxy-2,2'-dimethyl-6,7-(methylenebis(oxy))oxyacanthan; [14aS-(14aR*,26aS*)]-2,3,13,14,14a,15,26,26a-octahydro-22,30-dimethoxy-1,14-dimethyl- H-4,6:16,19-Dietheno-21,25-metheno-12H-[1,3]dioxolo[4,5-g]pyrido[2′,3′:17,18][1,10]dioxacycloeicosino[2,3,4-ij]isoquinoline; CEP

CATALOG #:

B3042-10	10 mg
B3042-50	50 mg

STRUCTURE:



MOLECULAR FORMULA: $C_{37}H_{38}N_2O_6$

MOLECULAR WEIGHT: 606.7

CAS NUMBER: 481-49-2

APPEARANCE: White to Beige powder

PURITY: ≥98%

SOLUBILITY:
~10 mg/ml in DMF
~2 mg/ml in ethanol
~5 mg/ml in DMSO

DESCRIPTION: Cepharanthine is an alkaloid extracted from the plant *Stephania cepharantha Hayata*. It shows antimalarial, antiviral, anti-inflammatory, and antitumor activities. The IC_{50} values against different strains of *Plasmodium falciparum* range beween 0.927 μM and 3.06 μM. It (10 μM) causes cell cycle arrest at G(1) phase, induces apoptosis and decreases the expression of STAT3 in SaOS2 Human osteosarcoma cells. It (20 mg/kg/day, ip for 19 days) significantly reduces the volume and weight of the tumor in nude mouse xenografts of SaOS2 cells. It reduces pro-inflammatory cytokines, including TNF-α, IL-1β, and IL-6 in RAW264.7 cells and mouse models. It inhibits the HIV-1 entry process by reducing plasma membrane fluidity. It inhibits the cytopathic effect in 2019-nCoV-related coronaviruses (2019-nCoVr) infected cells.

STORAGE TEMPERATURE: -20ºC

HANDLING: Do not take internally. Wear gloves and mask when handling the product! Avoid contact by all modes of exposure.

REFERENCES:

1. Huang, H., Hu, G., Wang, C., et al. Cepharanthine, an alkaloid from Stephania cepharantha Hayata, inhibits the inflammatory response in the RAW264.7 cell and mouse models. Inflammation 37(1), 235-246 (2014).
2. Desgrouas, C., Chapus, C., Desplans, J., et al. In vitro antiplasmodial activity of cepharanthine. Malar.J. 13:327, (2014).
3. Chen, Z., Huang, C., Yang, Y.l., et al. Inhibition of the STAT3 signaling pathway is involved in the antitumor activity of cepharanthine in SaOS2 cells. Acta.Pharmacol.Sin. 33(1), 101-108 (2012).
4. Fan, H-H., Wang, L-Q., Liu, W-L., et al. Repurposing of clinically approved drugs for treatment of coronavirus disease 2019 in a 2019-novel coronavirus-related coronavirus model. Chinese Medical Journal 133 (9), 1051-1056 (2020).
5. Matsuda, K., Hattori, S., Komizu, Y., et al. Cepharanthine inhibited HIV-1 cell-cell transmission and cell-free infection via modification of cell membrane fluidity. Bioorganic & Medicinal Chemistry Letters 24(9), 2115-2117 (2014).

RELATED PRODUCTS:

Glecaprevir (Cat. No. B2347)
Rilpivirine hydrochloride (Cat. No. B2427)
Remdesivir (Cat. No. B2997)
Nitazoxanide (Cat. No. B3041)
N4-Hydroxycytidine (Cat. No. B3039)

DISCLAIMER: ***FOR RESEARCH USE ONLY! Not to be used on humans.***