Proteins

Cephalotaxine

Cat. No.: HY-N0838 CAS No.: 24316-19-6 Molecular Formula: $C_{18}H_{21}NO_4$ Molecular Weight: 315.36 Target: Flavivirus Pathway: Anti-infection

Storage: Powder -20°C 3 years 2 years

In solvent -80°C 2 years

> -20°C 1 year

Product Data Sheet

SOLVENT & SOLUBILITY

In Vitro

DMSO: 25 mg/mL (79.27 mM; Need ultrasonic)

| Preparing Stock Solutions | Solvent Mass Concentration | 1 mg | 5 mg | 10 mg |
|------------------------------|-------------------------------|-----------|------------|------------|
| | 1 mM | 3.1710 mL | 15.8549 mL | 31.7098 mL |
| | 5 mM | 0.6342 mL | 3.1710 mL | 6.3420 mL |
| | 10 mM | 0.3171 mL | 1.5855 mL | 3.1710 mL |

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

In Vivo

- 1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 2.5 mg/mL (7.93 mM); Clear solution
- 2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE- β -CD in saline) Solubility: ≥ 2.5 mg/mL (7.93 mM); Clear solution
- 3. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.5 mg/mL (7.93 mM); Clear solution

BIOLOGICAL ACTIVITY

| Description | Cephalotaxlen ((-)-Cephalotaxine) is an alkaloid that can be isolated from Cephalotaxus fortunei, with antileukemic and antiviral activities. Cephalotaxlen has anti-ZIKV (Zika virus) activity $^{[1][2][3]}$. |
|---------------------------|--|
| IC ₅₀ & Target | ZIKV ^[3] |
| In Vitro | Cephalotaxine inhibits Zika infection by impeding viral replication and stability ^[3] . MCE has not independently confirmed the accuracy of these methods. They are for reference only. |

REFERENCES

- [1]. Wang DZ, et al. Studies on the alkaloids of Cephalotaxus. IX. Semi-synthesis of cephalotaxine esters and their anti-leukemic activity Yao Xue Xue Bao. 1992;27(3):178-84.
- [2]. Efferth T, et al. Molecular modes of action of cephalotaxine and homoharringtonine from the coniferous tree Cephalotaxus hainanensis in human tumor cell lines. Naunyn Schmiedebergs Arch Pharmacol. 2003 Jan;367(1):56-67.
- [3]. Zheng-Zong Lai, et al. Cephalotaxine inhibits Zika infection by impeding viral replication and stability. Biochem Biophys Res Commun. 2020 Feb 19; 522(4): 1052–1058.

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

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