Sodium copper chlorophyllin B

Cat. No.: HY-B2226

CAS No.: 28302-36-5

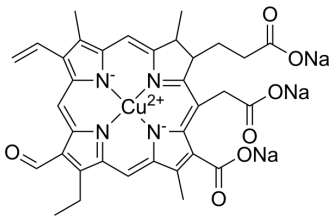
Molecular Formula: $C_{34}H_{29}CuN_4Na_3O_7$

Molecular Weight: 738.13

Target: HIV; Influenza Virus

Pathway: Anti-infection

Storage: 4°C, sealed storage, away from moisture
* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro

H_2O : 10 mg/mL (13.55 mM; Need ultrasonic)
DMSO : 6.67 mg/mL (9.04 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	1.3548 mL	6.7739 mL	13.5477 mL
5 mM	0.2710 mL	1.3548 mL	2.7095 mL
10 mM	0.1355 mL	0.6774 mL	1.3548 mL

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

In Vivo

1. Add each solvent one by one: PBS
   Solubility: 20 mg/mL (27.10 mM); Clear solution; Need ultrasonic
2. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 0.67 mg/mL (0.91 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 0.67 mg/mL (0.91 mM); Clear solution
4. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 0.67 mg/mL (0.91 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Sodium copper chlorophyllin B exerts antiviral activities against Influenza virus and HIV with IC_{50}s of 50 to 100 μM for both of them.

IC_{50} & Target

IC50: 50 to 100 μM (Influenza virus), 50 to 100 μM (HIV)[1]

In Vitro

Sodium copper chlorophyllin B exhibits influenza virus adsorption at 200 μM (P<0.05). The IC_{50} and the 50% cytotoxic

concentration (CC_{50}) of Sodium copper chlorophyllin lay from 50 to 100 μM and 200 to 400 μM, respectively. Sodium copper chlorophyllin B also inhibits HIV adsorption at 2.5 mM ($P<0.05$). The IC_{50} and CC_{50} of Sodium copper chlorophyllin lay from 50 to 100 μM and 200 to 400 μM, respectively[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

PROTOCOL

Cell Assay [1]

MT-2 cells are pre-incubated to the bamboo leaf extract solution (up to 10%), Sodium copper chlorophyllin (up to 5 mM) or test reagent-free culture medium for 10 min to assess the inhibitory activity at adsorption. The pre-incubated cells are washed extensively to be able to eliminate antiviral activity of test reagents remaining in the culture medium, and then they are exposed to HIV-1_{LAI} (1.3×10^{-4} $TCID_{50}$ per cell). In addition to these pre-incubated cells, control wells are prepared to evaluate growth of the cells in a virus-free condition. Then, virus-exposed and mock-exposed cells are cultured in the absence of test reagents for three days. The total viable cells are counted on day 3[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- ACS Infect Dis. 2020 May 8;6(5):882-890.

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REFERENCES

[1]. Akiko Ito, et al. In Vitro Inhibition of Cytopathic Effect of Influenza Virus and Human Immunodeficiency Virus by Bamboo Leaf Extract Solution and Sodium Copper Chlorophyllin. Yonago Acta Med. 2016 Mar; 59(1): 61-65.

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