CN128 hydrochloride

Cat. No.: HY-131060

CAS No.: 1335282-05-7

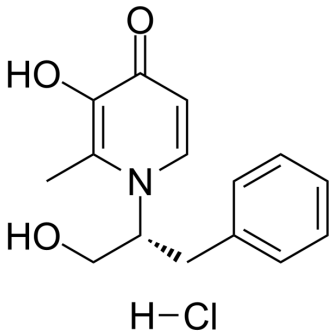
Molecular Formula: $C_{15}H_{18}ClNO_3$

Molecular Weight: 295.76

Target: Others

Pathway: Others

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 : 100 mg/mL (338.11 mM; Need ultrasonic)
DMSO : 28.57 mg/mL (96.60 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	3.3811 mL	16.9056 mL	33.8112 mL
5 mM	0.6762 mL	3.3811 mL	6.7622 mL
10 mM	0.3381 mL	1.6906 mL	3.3811 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: ≥ 2.86 mg/mL (9.67 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.86 mg/mL (9.67 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.86 mg/mL (9.67 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

CN128 hydrochloride (CN328) is an orally active and selective iron chelator. CN128 is used for the research of β-thalassemia [1].

In Vitro

CN128 hydrochloride possesses a high selectivity for iron(III) over others metals[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

CN128 hydrochloride (450 μmol/kg; p.o.) exhibits a good iron scavenging efficacy in rat[1].
The iron removal efficacies of CN128 displays a dose-dependent behavior[1].

CN128 hydrochloride lacks genetic toxicity[1].

CN128 hydrochloride (75 μmol/kg; i.g.) possesses good oral bioavailability (82.6%), high maximal plasma concentration, and low clearance rats after an oral dose of 75 μmol/kg[1].

CN128 hydrochloride is well-tolerated, with no mortality being observed at the higher dose levels in rats[1].

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

Animal Model:	Male SD rats (300 g)[1]
Dosage:	450 μmol/kg
Administration:	Oral gavage, 1 hour after ^{59}Fe-ferritin injection
Result:	Exhibited good iron scavenging activity.

Animal Model:	Sprague-Dawley rats (200~250 g)[1]
Dosage:	75 μmol/kg (Pharmacokinetic Analysis)
Administration:	Oral administration
Result:	AUC values= 16.38 mg/L•h, C_{max}=8.671 mg/L.

REFERENCES

[1]. Wenteng Chen, et al. CN128: A New Orally Active Hydroxypyridinone Iron Chelator. J Med Chem. 2020 Apr 23;63(8):4215-4226.

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

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