Web: www.taiclone.com
Tel: +886-2-2735-9682
Email: order@taiclone.com

Morphothiadin

Catalog No: tcsc0031547

Available Sizes

Size: 1mg

Size: 5mg

Size: 10mg

Size: 25mg

Size: 50mg

Size: 100mg

Specifications

CAS No:
1092970-12-1

Formula:
$C_{21}H_{22}BrFN_4O_3S$

Pathway:
Anti-infection

Target:
HBV

Purity / Grade:
>98%

Solubility:
DMSO : 60 mg/mL (117.79 mM; Need ultrasonic and warming)

Alternative Names:
GLS4

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Observed Molecular Weight:
509.39

Product Description

Morphothiadin is a potent inhibitor on the replication of both wild-type and adefovir-resistant **HBV** with an **IC_{50}** of 12 nM.

IC50 & Target: IC50: 12 nM (HBV)[1]

In Vitro: Morphothiadin is a potent inhibitor on the replication of both wild-type and adefovir-resistant HBV with an IC_{50} of 12 nM. Morphothiadin (GLS4) shows no toxicity up to 25 μM. The cytotoxic dose whereby 50% of cells die (CC_{50}) for primary hepatocytes is 115 μM for Morphothiadin (P90 is 190 μM for Morphothiadin (P[2].

In Vivo: The area under the concentration-time curve from 0 to 24 h (AUC_{0-24}) of Morphothiadin (GLS4) is 556 h•ng/mL. After intravenous administration of 10 mg/kg Morphothiadin, the total plasma clearance and apparent volume distribution are 4.2 liters/h/kg and 7.38 liters/kg, respectively. The bioavailability of Morphothiadin is 25.5%. It is found that virus titers have increased 83.5-fold in mice treated with 3.75 mg/kg per day of Morphothiadin, 28.3-fold among mice treated with 7.5 mg/kg per day, but only 3- to 6-fold among mice treated with the higher doses of Morphothiadin. There is generally an inverse relationship between Morphothiadin dose and virus titer, with the greatest rebound seen in mice treated with 3.75 mg/kg per day of Morphothiadin (540-fold) and the smallest rebound in mice treated with 60 mg/kg per day (23-fold) (P7.5 mg/kg per day significantly suppresses the virus replication cycle throughout the treatment period, while Morphothiadin doses of >15 mg/kg per day suppresses virus for up to 2 weeks after the end of treatment[2].