

# 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

### Observed Molecular Weight:

509.39

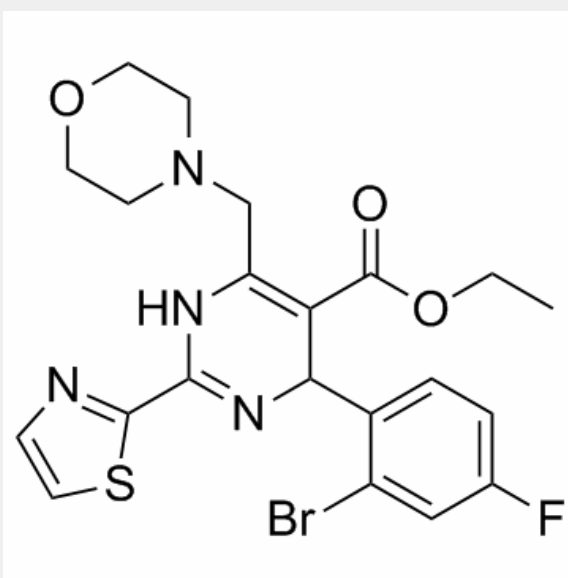
## Product Description

Morphothiadin is a potent inhibitor on the replication of both wild-type and adefovir-resistant **HBV** with an **IC<sub>50</sub>** of 12 nM.

IC50 & Target: IC50: 12 nM (HBV)<sup>[1]</sup>

**In Vitro:** Morphothiadin is a potent inhibitor on the replication of both wild-type and adefovir-resistant HBV with an IC<sub>50</sub> of 12 nM. Morphothiadin (GLS4) shows no toxicity up to 25 μM. The cytotoxic dose whereby 50% of cells die (CC<sub>50</sub>) 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<sub>0-24</sub>) 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<sup>[2]</sup>.



All products are for RESEARCH USE ONLY. Not for diagnostic & therapeutic purposes!