Trypanothione synthetase-IN-4

Cat. No.: HY-151149

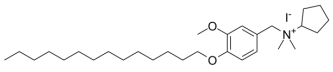
Molecular Formula: $C_{29}H_{52}INO_2$

Molecular Weight: 573.63

Target: Parasite

Pathway: Anti-infection

Storage: Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

Trypanothione synthetase-IN-4 is a ***L. infantum*** trypanothione synthetase (TryS) inhibitor, and the activity is dependent on the concentration of the polyamine substrate. Trypanothione synthetase-IN-4 has potent antileishmanicidal activity with an EC_{50} value of 0.6 μM and a selectivity index of 35. Trypanothione synthetase-IN-4 can be used for the research of leishmaniasis[1].

IC_{50} & Target

IC50 against LiTryS: 7.3 μM (ATP); 7.8 μM (GSH) and 5.5 μM (Spd)[1].
EC50: 0.4 μM (L. infantum); 0.6 μM (against intracellular amastigotes)[1].

In Vitro

Trypanothione synthetase-IN-4 (15 μM) has activity against LiTryS for three substrates (ATP, GSH and Spd) with IC_{50} values of 7.3 μM, 7.8 μM and 5.5 μM, respectively[1].
Trypanothione synthetase-IN-4 (25 μM, 24 h) has antileishmanial activity with an EC_{50} value of 0.4 μM in axenic amastigotes of L. infantum[1].
Trypanothione synthetase-IN-4 (25 μM, 72 h) is active against intracellular amastigotes (EC_{50}=0.6 μM) and has a high selectivity index of 35.5[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Cytotoxicity Assay[1]

Cell Line:	HepG2 (human hepatoma cell line)
Concentration:	25 μM
Incubation Time:	72 h
Result:	Showed antileishmanial activity with an EC_{50} value of 0.4 μM in axenic amastigotes of L. infantum.

REFERENCES

[1]. M. Alcón-Calderón, et al. Identification of L. infantum trypanothione synthetase inhibitors with leishmanicidal activity from a (non-biased) in-house chemical library, European Journal of Medicinal Chemistry (2022).

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

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