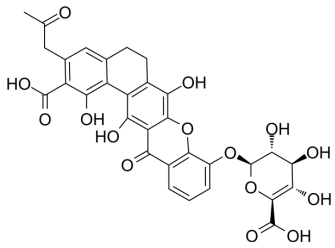
Chrexanthomycin C

Cat. No.:	HY-N10579
Molecular Formula:	$C_{31}H_{24}O_{15}$
Molecular Weight:	636.51
Target:	DNA/RNA Synthesis
Pathway:	Cell Cycle/DNA Damage
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

Chrexanthomycin C is an orally active marine natural product with remarkable bioactivities. Chrexanthomycin C has binding affinity for DNA $(G4C2)^4$ G4 with a K_d value of 2.8 mM. Chrexanthomycin C can be used for the research of neurodegenerative disease such as amyotrophic lateral sclerosis (ALS)[1].

IC_{50} & Target

Kd: 2.8 mM (DNA $(G4C2)^4$ G4)[1]

In Vitro

Chrexanthomycin C (Compounds cC) (0.1-10 mM) binds DNA $(G4C2)^4$ G4 with a K_d value of 2.8 mM[1].
Chrexanthomycin C has good permeability, low cytotoxicity, and nonhemolytic activity[1].
Chrexanthomycin C (1.57 μM) rescues G4C2 EHR-related pathologies in cells[1].
Chrexanthomycin C selectively binds to DNA and RNA G4C2 G4s[1].
Chrexanthomycin C (0-100 μM) dramatically reduceS G4C2 EHR-caused cell death, diminish G4C2 RNA foci in (G4C2)29-expressing Neuro2a cells, and significantly eliminate ROS in HT22 cells[1].

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

Cell Viability Assay[1]

Cell Line:	HEK293T cells
Concentration:	0.16, 1.57 and 15.67 μM
Incubation Time:	24 h
Result:	Showed no cytotoxicity up to the concentration of 10 μg/mL.

In Vivo

Chrexanthomycin C (Compounds cC) (fed; 100 μM) significantly rescues eye degeneration and improve locomotor deficits in (G4C2)29-expressing[1].

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Animal Model:	Drosophila[1]
Dosage:	100 μM
Administration:	fed

Result:	Rescued G4C2 EHR-Related Pathologies in Drosophila.

REFERENCES

[1]. Aifang Cheng, et al. Selective C9orf72 G-Quadruplex-Binding Small Molecules Ameliorate Pathological Signatures of ALS/FTD Models. Journal of Medicinal Chemistry Article ASAP.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com
Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA