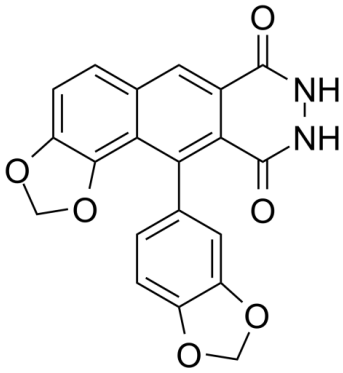
Data Sheet

Product Name:	Helioxanthin 8-1
Cat. No.:	CS-3198
CAS No.:	840529-13-7
Molecular Formula:	$C_{20}H_{12}N_2O_6$
Molecular Weight:	376.32
Target:	HBV
Pathway:	Anti-infection
Solubility:	DMSO : 10 mg/mL (26.57 mM; Need ultrasonic)



BIOLOGICAL ACTIVITY:

Helioxanthin 8-1 is an analogue of helioxanthin, exhibites significant in vitro anti-HBV/HCV/HSV-1/HIV activity with EC50 of >5/10/1.4/15 uM. IC50 value: >5/10/1.4/15 uM(HBV/HCV/HSV-1/HIV) [1] Target: Antiviral agent The cyclic hydrazide 28(Helioxanthin 8-1) showed the most potent antiHBV activity among those helioxanthin analogues tested. In addition, compound 28 exhibited moderately potent activity against HIV. It would therefore be promising to study helioxanthin analogues that contain a six-membered ring instead of the five-membered ring found in the lactam [1]. 8-1 exhibited effective inhibition on DHBV replication. The combination of 8-1 with 3TC resulted in additional anti-DHBV activity. Viral induced cells displayed higher susceptibility to 8-1 treatment than non-induced cells. HBV X protein might not be an essential factor in the initiation of the biological activity of 8-1, as demonstrated by its absence in DHBV [2].

PROTOCOL (Extracted from published papers and Only for reference)

Cell assay [2] The dstet5 cells were seeded in collagen-1-coated 24-well culture plates (Becton Dickinson Laboratory) at a density of 3×104 cells/well with or without doxycycline for 3 days. The culture medium was removed and replaced with 1 ml of the same medium with or without compounds for another 3 days. A volume of 200 µl of 5 mg/ml MTT was added to each well and the cells were further incubated for 4 h. After removal of medium, 400 µl of dimethyl sulfoxide (Sigma–Aldrich) were added to the cultures and the plates were rotated at room temperature for 5 min. The plates were analysed by a plate reader (Elx 800 UV Universal Microplate Reader; Bio-Tek Instruments, Inc., Winooski, VT, USA) under a 595 nm wavelength. The CC50 values were calculated as described above for the IC50 calculation, by comparing the values of drug treatment with those of the mock treatment samples.

References:

[1]. Yeo H, et al. Synthesis and antiviral activity of helioxanthin analogues. J Med Chem. 2005 Jan 27;48(2):534-46.

[2]. Ying C, et al. Helioxanthin analogue 8-1 inhibits duck hepatitis B virus replication in cell culture. Antivir Chem Chemother. 2010;21(2):97-103.

CAIndexNames:

1,3-Benzodioxolo[4,5-g]phthalazine-7,10-dione, 11-(1,3-benzodioxol-5-yl)-8,9-dihydro-

SMILES:

O=C1NNC(C2=C(C3=CC=C(OCO4)C4=C3)C5=C6C(OCO6)=CC=C5C=C21)=O

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

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