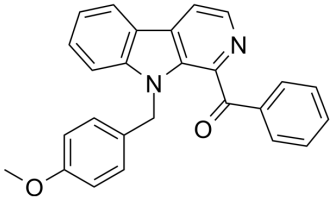
H1k

Cat. No.:	HY-149261
Molecular Formula:	$C_{26}H_{20}N_2O_2$
Molecular Weight:	392.45
Target:	Autophagy; CDK
Pathway:	Autophagy; Cell Cycle/DNA Damage
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

H1k, a Eudistomin Y derivative, is a lysosome-targeted antiproliferation agent. H1k increases the autophagy signal and downregulate the expression of cyclin-dependent kinase (CDK1) and cyclin B1. H1k can be used in research of cancer[1].

In Vitro

H1k (72 h) has antiproliferation activity against LS-180, HepG-2, SGC-7901, A549 and MDA-MB-231 cells with IC_{50} values of 2.9, 9.6, 12.1, 14.8, and 20.5 μM, respectively[1].
H1k (0-50 μM; 24 h) triggers a distinct G2-M arrest in the MDA-MB-231 and SGC-7901 cells in a dose-dependent manner[1].
H1k (0-20 μM; 6 h; MDA-MB-231 cells) induces autophagy to exert its antiproliferative activity, and lysosomes are its functional targets[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Cycle Analysis[1]

Cell Line:	MDA-MB-231 and SGC-7901 cells
Concentration:	0, 5, 10, 20, 50 μM
Incubation Time:	24 hours
Result:	Arrested cell cycle at G2-M period in a dose-dependent manner.

Western Blot Analysis[1]

Cell Line:	MDA-MB-231 and SGC-7901 cells
Concentration:	0, 5, 10, and 20 μM
Incubation Time:	6 hours
Result:	Increased the LC3B-I and LC3B-II levels at MDA-MB-231 cells in a dose-dependent manner.

Western Blot Analysis[1]

Cell Line:	MDA-MB-231 and SGC-7901 cells
Concentration:	0, 5, 10, 20, 50 μM
Incubation Time:	6 hours

Result:	Inhibited antiproliferation of cancer cells and the downregulation of CDK1 and cyclin B1.

REFERENCES

[1]. Yang G, et, al. Design, synthesis, and discovery of Eudistomin Y derivatives as lysosome-targeted antiproliferation agents. Eur J Med Chem. 2023 Mar 15;250:115193.

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