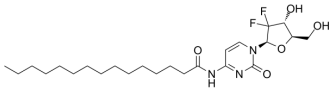
HDAC6-IN-12

Cat. No.:	HY-150722
CAS No.:	2803866-44-4
Molecular Formula:	$C_{24}H_{39}F_2N_3O_5$
Molecular Weight:	487.58
Target:	HDAC
Pathway:	Cell Cycle/DNA Damage; Epigenetics
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

HDAC6-IN-12 (compound GZ) is a potent HDAC6 inhibitor. HDAC6-IN-12 has anticancer activity through merges into DNA strands causing DNA damage. HDAC6-IN-12 can be used for cancer research[1].

In Vitro

HDAC6-IN-12 (compound GZ) (72 h) has anti-proliferative activity on tumor cells against HuH-7, HeLa, MDA-MB-231, SKOV3, A549, PANC-1, HCT-116, SGC7901 and 4T1 cells with IC_{50} values of 0.12 μM, 0.43 μM, 0.14 μM, 0.62 μM, 0.14 μM, 1.08 μM, 0.30 μM, 3.70 μM and 0.66 μM, respectively[1].

HDAC6-IN-12 (compound GZ) (0-3 μM; 24 h; MBA-MB-231 cells) merges into DNA strands causing DNA damage and increases the level of phospho-γ-H2A.X, which is the marker of DNA strand break[1].

HDAC6-IN-12 (compound GZ) (0-100 μM; 30 min) has major metabolic enzymes including CYP3A2, CYP1A1/2 isoforms[1].

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

Western Blot Analysis[1]

Cell Line:	MBA-MB-231 cells
Concentration:	0, 0.1, 0.3, 1 and 3 μM
Incubation Time:	24 hours
Result:	Increased the level of phospho-γ-H2A.X in a dose-dependent manner.

In Vivo

HDAC6-IN-12 (compound GZ) (5-10 mg/kg; i.p.; once every three days, for 15 d; bablc female mice) inhibits tumor growth in a dose-dependent manner[1].

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Animal Model:	Bablc female mice[1]
Dosage:	5 and 10 mg/kg
Administration:	Intraperitoneal injection; once every three days, for 15 days
Result:	Inhibited tumor growth with TGI of 73.2% at 5 mg/kg and 83.8% at 10 mg/kg, respectively.

REFERENCES

[1]. Li Y, et, al. Design, synthesis and antitumor activity study of a gemcitabine prodrug conjugated with a HDAC6 inhibitor. Bioorg Med Chem Lett. 2022 Sep 15;72:128881.

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