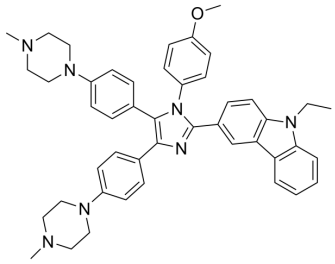
IZCZ-3

Cat. No.:	HY-111411
CAS No.:	2223019-53-0
Molecular Formula:	$C_{46}H_{49}N_7O$
Molecular Weight:	715.93
Target:	c-Myc; Autophagy
Pathway:	Apoptosis; Autophagy
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 2 years -20°C 1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : 5 mg/mL (6.98 mM; ultrasonic and warming and heat to 80°C)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	1.3968 mL	6.9839 mL	13.9678 mL
	5 mM	0.2794 mL	1.3968 mL	2.7936 mL
	10 mM	---	---	---

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description

IZCZ-3 is a potent c-MYC transcription inhibitor with antitumor activity[1].

IC_{50} & Target

c-MYC transcription[1]

In Vitro

IZCZ-3 (2.1 μM-15.9 μM; 24 hours) significantly inhibits SiHa, HeLa, Huh7, and A375 cancer cell proliferation (IC_{50}s of 3.3, 2.1, 4.1, and 4.2 μM, respectively). IZCZ-3 induces only weak growth inhibition in the BJ fibroblasts (IC_{50}=15.9 μM) and mouse mesangial cells (IC_{50}=15.6 μM), suggesting that IZCZ-3 is more effective against cancer cells than against c-MYC-independent normal cells[1].

IZCZ-3 (0-5 μM; 12 hours) induces an apparent accumulation of cells in the G0/G1 phase in SiHa cells in a dose-dependent manner[1].

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

Cell Proliferation Assay[1]

Cell Line:	SiHa, HeLa, Huh7, and A375 cancer cells (with overexpression of c-MYC protein) and in normal BJ fibroblasts and primary cultured mouse mesangial cells (with relatively low

	expression of c-MYC protein).
Concentration:	2.1 μM-15.9 μM
Incubation Time:	24 hours
Result:	IC_{50}s of 3.3, 2.1⊠4.1, and 4.2 μM for SiHa, HeLa, Huh7, and A375 cancer cells; IC_{50}s of 15.9 μM and 15.6 μM for BJ fibroblasts and mouse mesangial cells.

Cell Cycle Analysis[1]

Cell Line:	SiHa cells
Concentration:	0, 1.25, 2.5, and 5 μM
Incubation Time:	12 hours
Result:	Induced an apparent accumulation of cells in the G0/G1 phase (increasing from 61% to 70%) in a dose-dependent manner.

In Vivo

IZCZ-3 (20, 10, and 5 mg/kg; intraperitoneally; every other day for 24 days) inhibits tumor growth in BALB/c nude mice with SiHa human cervical squamous cancer xenograft[1].

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

Animal Model:	BALB/c nude mice (5 weeks old) bearing SiHa human cervical squamous cancer xenograft model[1]
Dosage:	20, 10, and 5 mg/kg
Administration:	Treated intraperitoneally; every other day for 24 days
Result:	Treatment with 20, 10, and 5 mg/kg resulted in a significant reduction in tumor weight with tumor growth inhibition (TGI) of 69%, 64%, and 57%, respectively. Displayed time-dependent inhibition of tumor growth.

CUSTOMER VALIDATION

- Oncogene. 2022 Oct 21.
- Cell Biol Toxicol. 2021 Sep 12.

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REFERENCES

[1]. Hu MH, et al. Discovery of a New Four-Leaf Clover-Like Ligand as a Potent c-MYC Transcription Inhibitor Specifically Targeting the Promoter G-Quadruplex. J Med Chem. 2018 Mar 22;61(6):2447-2459.

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

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