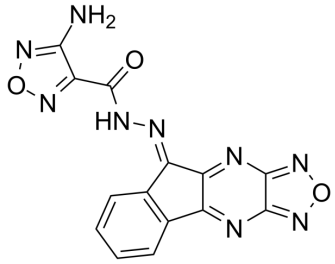
LQZ-7F

Cat. No.:	HY-122678
CAS No.:	354543-09-2
Molecular Formula:	$C_{14}H_7N_9O_3$
Molecular Weight:	349.26
Target:	Survivin; Apoptosis
Pathway:	Apoptosis
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 6 months -20°C 1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 5 mg/mL (14.32 mM; ultrasonic and warming and heat to 60°C)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.8632 mL	14.3160 mL	28.6320 mL
	5 mM	0.5726 mL	2.8632 mL	5.7264 mL
	10 mM	0.2863 mL	1.4316 mL	2.8632 mL

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

BIOLOGICAL ACTIVITY

Description

LQZ-7F, a survivin dimerization inhibitor, induces spontaneous apoptosis and synergizes with Docetaxel in prostate cancer cells. LQZ-7F dose-dependently inhibits survival of both PC-3 and C4-2 cells with IC_{50}s of 2.99 and 2.47 μM, respectively[1].

In Vitro

LQZ-7F could be hudrolyzed under acidic conditions[1].

LQZ-7F (2.5 μM, 72 hours) displays cytotoxicity towards human cancer cells (PC-3, C4-2) with the IC_{50}s of 2.99 μM and 2.74 μM, respectively[1].

LQZ-7F effectively inhibits survival of all cancer cell lines with IC_{50} values ranging between 0.4 and 4.4 mM[2].

LQZ-7F (2 μM, 24 hours) disrupts microtubule structure and cause mitotic arrest in P3 cells[2].

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

Apoptosis Analysis[1]

Cell Line:	PC3, HL-60 cells
Concentration:	0, 5, 10 μM

Incubation Time:	
Result:	Caused 54% to 69% apoptosis for PC3 and 66% to 98% apoptosis for HL-60 cells.

Cell Cytotoxicity Assay[1]

Cell Line:	PC-3, DU145
Concentration:	10, 20 μM
Incubation Time:	72 hours
Result:	Showed that the IC_{50} in human PC3 and DU145 cells was approximately 25 μM.

In Vivo

LQZ-7F (i.p. injection; 25 mg/kg once every 3 days; 24 days) inhibits growth of xenograft tumor and may be due to its induction of surviving degradation in vivo[1].

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Animal Model:	4- to 6-week-old male NSG (NOD/SCID/IL-2Rg null) mice[2].
Dosage:	25 mg/kg
Administration:	24 days
Result:	Inhibited growth of xenograft tumors by inhibiting surviving.

REFERENCES

[1]. Robert Peery, et al. A novel survivin dimerization inhibitor without a labile hydrazone linker induces spontaneous apoptosis and synergizes with docetaxel in prostate cancer cells. Bioorg Med Chem. 2022 Jul 1;65:116761.

[2]. Qi Jing, et al. Effective Targeting of the Survivin Dimerization Interface with Small-Molecule Inhibitors. Cancer Research. 2016 Jan. 76(2):453-462.

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