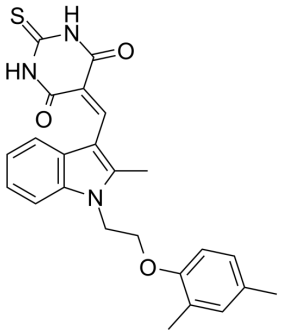
ZLDI-8



Cat. No.: HY-123931

CAS No.: 667880-38-8

Molecular Formula: $C_{24}H_{23}N_3O_3S$

Molecular Weight: 433.52

Target: Notch; Apoptosis; Phosphatase

Pathway: Neuronal Signaling; Stem Cell/Wnt; Apoptosis; Metabolic Enzyme/Protease

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 : 62.5 mg/mL (144.17 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.3067 mL	11.5335 mL	23.0670 mL
	5 mM	0.4613 mL	2.3067 mL	4.6134 mL
	10 mM	0.2307 mL	1.1533 mL	2.3067 mL

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

BIOLOGICAL ACTIVITY

Description

ZLDI-8 is a Notch activating/cleaving enzyme ADAM-17 inhibitor and inhibits the cleavage of Notch protein. ZLDI-8 decreases the expression of pro-survival/anti-apoptosis and epithelial-mesenchymal transition (EMT) related proteins. ZLDI-8 is also a competitive and irreversible tyrosine phosphatase (Lyp) inhibitor with an IC_{50} of 31.6 μM and a K_i of 26.22 μM. ZLDI-8 inhibits the growth of MHCC97-H cells with an IC_{50} of 5.32 μM[1][2].

IC_{50} & Target

ADAM-17[1]
IC50: 31.6 μM (Tyrosine phosphatase)[1]
Ki: 26.22 μM (Tyrosine phosphatase)[1]

In Vitro

ZLDI-8 (0.03-30 μM; 6-72 hours; MHCC97-H cells) treatment reduces cell viability in a time- and dose-dependent manner[1].
ZLDI-8 (1-10 μM; 6-72 hours; MHCC97-H cells) significantly decreases the level of NICD and the accumulation of NICD in the nucleus. ZLDI-8 could also reduce the expression of pro-survival/anti-apoptosis regulators, Survivin and cIAP1/2. And also increases the expression of epithelial marker E-Cadherin and reduced mesenchymal markers N-Cadherin and Vimentin[1].
ZLDI-8 enhances chemotherapy effects on tumor cell proliferation blockage, induction of apoptosis and cell-cycle arrest by inhibiting Notch pathway and blocking chemical resistance[1].

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

Cell Viability Assay[1]

Cell Line:	MHCC97-H cells
Concentration:	0.03 μM, 0.1 μM, 0.3 μM, 1 μM, 3 μM, 10 μM, 30 μM
Incubation Time:	6 hours, 12 hours, 24 hours, 48 hours, 72 hours
Result:	Emerged cytotoxic effect on MHCC97-H cells in a time- and dose-dependent manner.

Western Blot Analysis[1]

Cell Line:	MHCC97-H cells
Concentration:	1 μM, 3 μM, 10 μM
Incubation Time:	6 hours, 12 hours, 24 hours, 48 hours, 72 hours
Result:	Significantly decreased the level of NICD and the accumulation of NICD in the nucleus. Also reduced the expression of pro-survival/anti-apoptosis regulators, Survivin and cIAP1/2

In Vivo

ZLDI-8 (0.2-2 mg/kg; intraperitoneal injection; every two days; for 20 days; nude mice) treatment enhances the effect of Sorafenib on inhibiting tumor growth in nude HCC-bearing mice model[1].

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

Animal Model:	Nude mice with MHCC-97H cells[1]
Dosage:	2 mg/kg, 1 mg/kg, 500 μg/kg, or 200 μg/kg
Administration:	Intraperitoneal injection; every two days; for 20 days
Result:	Inhibited tumor growth in nude HCC-bearing mice model.

CUSTOMER VALIDATION

- Life Sciences. 2022.

See more customer validations on www.MedChemExpress.com

REFERENCES

[1]. Zhang Y, et al. Novel ADAM-17 inhibitor ZLDI-8 enhances the in vitro and in vivo chemotherapeutic effects of Sorafenib on hepatocellular carcinoma cells. Cell Death Dis. 2018 Jul 3;9(7):743.

[2]. Hou X, et al. Fast identification of novel lymphoid tyrosine phosphatase inhibitors using target-ligand interaction-based virtual screening. J Med Chem. 2014 Nov 26;57(22):9309-22.

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

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com
Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA