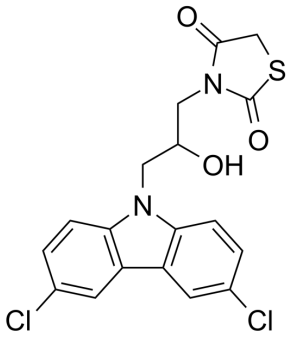
10074-A4

Cat. No.:	HY-124129
CAS No.:	312631-87-1
Molecular Formula:	$C_{18}H_{14}Cl_2N_2O_3S$
Molecular Weight:	409.29
Target:	c-Myc
Pathway:	Apoptosis
Storage:	4°C, protect from light * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 125 mg/mL (305.41 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.4433 mL	12.2163 mL	24.4326 mL
	5 mM	0.4887 mL	2.4433 mL	4.8865 mL
	10 mM	0.2443 mL	1.2216 mL	2.4433 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.08 mg/mL (5.08 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (5.08 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

10074-A4 is a c-Myc inhibitor. 10074-A4 could bind to c-Myc$_{370-409}$ at different sites along the peptide chain. 10074-A4 has anticancer effects[1][2].

In Vitro

10074-A4 shows inhibitory activity of HL-60 cells with an IC_{50} of 15.1 μM[1].
10074-A4 (25-50 μM; 24 hours) arrests the cell cycle at the S-phase in a dose-dependent manner in HL-60 cells. 10074-A4 inhibits the mRNA level of the c-Myc target genes, CCND2 and CDK4[1].
10074-A4 could bind to c-Myc$_{370-409}$ at different sites along the peptide chain and its binding behavior could be described as a 'ligand cloud'. Even in the bound state, the structure of the c-Myc$_{370-409}$ peptide remained a dynamic ensemble. The 10074-A4 ligand bound at different sites throughout the c-Myc$_{370-409}$ chain with different strength[2].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Viability Assay[1]

Cell Line:	HL-60 cells
Concentration:	25 μM, 50 μM
Incubation Time:	24 hours
Result:	Arrested the cell cycle at the S-phase.

REFERENCES

[1]. Chen Yu, et al. Structure-based Inhibitor Design for the Intrinsically Disordered Protein c-Myc. Sci Rep. 2016 Mar 2;6:22298.

[2]. Fan Jin, et al. Ligand clouds around protein clouds: a scenario of ligand binding with intrinsically disordered proteins. PLoS Comput Biol. 2013;9(10):e1003249.

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