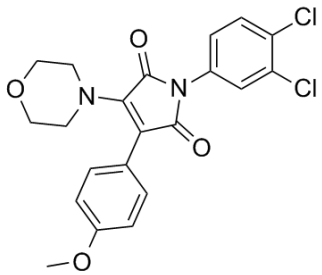
RI-2

Cat. No.:	HY-16904
CAS No.:	1417162-36-7
Molecular Formula:	$C_{21}H_{18}Cl_2N_2O_4$
Molecular Weight:	433.28
Target:	RAD51
Pathway:	Cell Cycle/DNA Damage
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 : 130 mg/mL (300.04 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	2.3080 mL	11.5399 mL	23.0798 mL
5 mM	0.4616 mL	2.3080 mL	4.6160 mL
10 mM	0.2308 mL	1.1540 mL	2.3080 mL

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

BIOLOGICAL ACTIVITY

Description

RI-2 is a reversible RAD51 inhibitor, with an IC_{50} of 44.17 μM, and specifically inhibits homologous recombination repair in human cells.

IC_{50} & Target

IC50: 44.17 μM (RAD51)[1]

In Vitro

RI-2 (7a) is a reversible RAD51 inhibitor, with an IC_{50} of 44.17 μM. RI-2 specifically inhibits homologous recombination repair in human cells. RI-2 (150 μM) induces a significant sensitization of cells[1].

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

PROTOCOL

Cell Assay [1]

HEK293 cells are plated into 96-well tissue culture plates at a density of 300 cells per well in the presence or absence of 50 nM mitomycin C (MMC) for 24 hours at 37°C, 5% CO_2. Media is subsequently replaced with fresh media containing 0.5%

DMSO plus RI-2 for an additional 24 hours. RI-2 is then removed, and cultures are allowed to grow to a 50-70% confluence. Average survival from at least three replicates is measured using CellGlo reagentor. RI-2 is deemed successful in sensitizing cells to MMC if they generate significantly greater toxicity in the presence of MMC relative to the absence of MMC. Specifically, sensitization is scored as a "+" when non-overlapping standard errors are observed for at least two pairs of compound doses[1].

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REFERENCES

[1]. Budke B, et al. An optimized RAD51 inhibitor that disrupts homologous recombination without requiring Michael acceptor reactivity. J Med Chem. 2013 Jan 10;56(1):254-63.

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