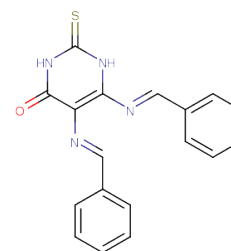


SCR7

Chemical Properties

CAS No. :	1533426-72-0
Formula:	C ₁₈ H ₁₄ N ₄ O ₂
Molecular Weight:	334.4
Appearance:	no data available
Storage:	Powder: -20°C for 3 years In solvent: -80°C for 1 year



Biological Description

Description	SCR7, a specific DNA Ligase IV inhibitor, blocks nonhomologous end-joining (NHEJ).
Targets(IC50)	Apoptosis,DNA/RNA Synthesis,CRISPR/Cas9
In vitro	In a Swiss albino mouse model loaded with Dalton's lymphoma, intraperitoneal injection of SCR7 (20 mg/kg) fails to reduce tumor size. Conversely, in BALB/c mice, intraperitoneal injection of SCR7 (20 mg/kg) enhances the cytotoxic effects of radiation, etoposide, and 3-aminobenzamide on derived tumors of Dalton's lymphoma cells.
In vivo	SCR7 exhibits significant inhibition of cell proliferation across various cell lines, with IC50 values reported as follows: 40 μ M in MCF7 cells, 34 μ M in A549 cells, 44 μ M in HeLa cells, 8.5 μ M in T47D cells, 120 μ M in A2780 cells, 10 μ M in HT1080 cells, and 50 μ M in Nalm6 cells.
Kinase Assay	Complementation of SCR7 Inhibition with Purified Ligase IV: Complementation experiment is carried out by adding increasing concentrations of purified Ligase IV/XRCC4 complex (30, 60, and 120 fmol) along with the oligomeric DNA substrates (5' compatible and 5'-5' noncompatible ends) to the SCR7-treated extracts. Reactions are incubated for 2 h at 25°C. The reaction products are then resolved on 8% denaturing PAGE. The gel is dried and exposed and the signal is detected with a PhosphorImager and analyzed with Multi Gauge (V3.0) software.
Cell Research	SCR7 is dissolved in DMSO and stored, and then diluted with appropriate medium before use[3]. Wild-type, AAVS1TLR HEK293 and mouse NIH3T3 cells are maintained in DMEM supplied with 15% FBS, cells are passaged three times per week. The mouse Burkitt lymphoma cell line, generated from a Burkitt-like mouse lymphoma is maintained in DMEM supplied with 15% FBS, 2 mM HEPES, 2 mM sodium pyruvate, 2 mM L-glutamine, and 1 $\times$ NAA, beta-mercaptoethanol and passaged four times per week. For puromycin selection, mCherry+ cells are sorted, seeded at 103 cells/well and selected with 3 mg/mL of Puromycin for 2 weeks. Then colonies are counted and single cells are sorted. The SCR7 inhibitor is purchased, 12 h after transfection these cells are maintained in complete medium supplied with 1 mM SCR7 inhibitor until analysis. At SCR7 concentrations of 60 mM and 10 mM, A reduction of transfection efficiency and of cell viability is observed[3].

Solubility Information

Solubility	DMSO: 45 mg/mL (134.57 mM), (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.9904 mL	14.9522 mL	29.9043 mL
5 mM	0.5981 mL	2.9904 mL	5.9809 mL
10 mM	0.299 mL	1.4952 mL	2.9904 mL
50 mM	0.0598 mL	0.299 mL	0.5981 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Reference

Srivastava M, et al. An inhibitor of nonhomologous end-joining abrogates double-strand break repair and impedes cancer progression. Cell. 2012 Dec 21;151(7):1474-87.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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