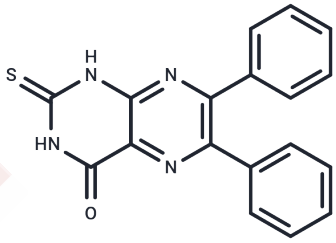
# Data Sheet (Cat.No.T1724)

TargetMol

## SCR7 pyrazine

### Chemical Properties



CAS No. : 14892-97-8

Formula: C18H12N4OS

Molecular Weight: 332.38

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

### Biological Description

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| Description | SCR7 pyrazine (SCR7) enhances CRISPR-Cas9-mediated homology-directed repair (HDR) efficiency in vitro up to 19-fold. Inhibits nonhomologous end-joining (NHEJ). |
| Targets(IC50) | Apoptosis,CRISPR/Cas9,DNA/RNA Synthesis |
| In vitro | SCR7 effectively inhibits the formation of multimers at 200 μM and above. SCR7 successfully inhibits cell proliferation of MCF7, A549, HeLa, T47D, A2780, HT1080, and Nalm6 with IC50 of 40, 34, 44, 8.5, 120, 10, and 50 μM, respectively.[1] SCR7 suppresses the NHEJ repair of CRISPR-Cas9-induced DSBs.[2] |
| In vivo | SCR7 treatment (10 mg/kg, i.m.) signi?cantly reduces breast adenocarcinoma-induced tumor, and exhibits 4-fold increase in lifespan compared with control group. However, in Swiss albino mice with Dalton's lymphoma tumor model, SCR7 (20 mg/kg, i.p.) exhibits neither tumor regression nor increase in lifespan. In BALB/c mice, SCR7 (20 mg/kg, i.p.) signi?cantly enhances the cytotoxic effects of radiation, etoposide and 3-Aminobenzamide on tumor derived from Dalton's lymphoma (DLA) cells.[1] |
| Kinase Assay | Complementation of SCR7 Inhibition with Puri?ed Ligase IV: Complementation experiment is carried out by adding increasing concentrations of puri?ed 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-treatedextracts. 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 | Cell proliferation of cancer cells are determined by MTT and trypan blue assays. Briefly, MCF7, CEM, HeLa, A549, HT1080, A2780, T47D, Nalm6, N114 and K562 cells are grown in presence of SCR7 (10, 50, 100, and 250?μM) for 24 or 48?h, and subjected to MTT or trypan blue assays. Each experiment is repeated a minimum of three independent times. (Only for Reference) |

### Solubility Information

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|---|---|
| Solubility | H2O: < 1 mg/mL (insoluble or slightly soluble),<br>Ethanol: 3 mg/mL (9.03 mM),Sonication is recommended.<br>DMSO: 27.78 mg/mL (83.58 mM),Sonication is recommended. |

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|---|---|
| Solubility | (< 1 mg/ml refers to the product slightly soluble or insoluble) |
| In vivo Formulation | 10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (6.02 mM),Sonication is recommended.<br>*Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.* |

Preparing Stock Solutions

| | 1mg | 5mg | 10mg |
|---|---|---|---|
| 1 mM | 3.0086 mL | 15.043 mL | 30.086 mL |
| 5 mM | 0.6017 mL | 3.0086 mL | 6.0172 mL |
| 10 mM | 0.3009 mL | 1.5043 mL | 3.0086 mL |
| 50 mM | 0.0602 mL | 0.3009 mL | 0.6017 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.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Srivastava M, et al. Cell. 2012, 151(7), 1474-1487.
Chu VT, et al. Nat Biotechnol. 2015, doi: 10.1038/nbt.3198.