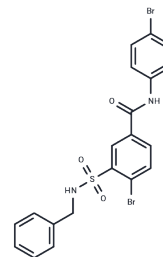


RS-1

Chemical Properties

CAS No. : 312756-74-4
Formula: C₂₀H₁₆Br₂N₂O₃S
Molecular Weight: 524.23
Appearance: no data available
Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year



Biological Description

| | |
|---------------|---|
| Description | RS-1 is a RAD51 activator. RS-1 also increases CRISPR/Cas9-mediated knock-in efficiencies. |
| Targets(IC50) | DNA/RNA Synthesis |
| In vitro | RS-1 serves as an activator of RAD51, enhancing the binding affinity of hRAD51 to DNA, with a dissociation constant (K _d) between 48 nM and 107 nM, in conditions containing ATP or ADP and even in the absence of nucleotide cofactors, without inhibiting ATPase activity of RAD51. At a concentration of 20 μM, RS-1 alters the length and helical pitch of hRAD51-DNA complexes. Furthermore, RS-1 progressively augments the strand assimilation activity of hRAD51 across a range of concentrations (0, 1, 5, 10, 15, 20, and 25 μM). At 7.5 μM, it bolsters human cells' resilience to cross-linking agents used in chemotherapy[1]. In addition, RS-1 enhances Cas9-mediated gene editing efficiency in rabbit embryos at concentrations of 0, 7.5, and 15 μM[2]. |

Solubility Information

| | |
|------------|--|
| Solubility | DMSO: 90 mg/mL (171.68 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble) |
|------------|--|

Preparing Stock Solutions

| | 1mg | 5mg | 10mg |
|-------|-----------|-----------|------------|
| 1 mM | 1.9076 mL | 9.5378 mL | 19.0756 mL |
| 5 mM | 0.3815 mL | 1.9076 mL | 3.8151 mL |
| 10 mM | 0.1908 mL | 0.9538 mL | 1.9076 mL |
| 50 mM | 0.0382 mL | 0.1908 mL | 0.3815 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

Jayathilaka K, et al. A chemical compound that stimulates the human homologous recombination protein RAD51. Proc Natl Acad Sci U S A. 2008 Oct 14;105(41):15848-53.

Song J, et al. RS-1 enhances CRISPR/Cas9- and TALEN-mediated knock-in efficiency. Nat Commun. 2016 Jan 28;7:10548.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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