

产品名称：
4-Bromo-N-(4-bromophenyl)-3-[[(phenylmethyl)amino]sulfonyl]benzamide
产品别名：**RS-1**

生物活性:

Description	RS-1 is a RAD51 activator, and also increases CRISPR/Cas9-mediated knock-in efficiencies.	
IC ₅₀ & Target	RAD51[1], CRISPR/Cas9[2]	
In Vitro	RS-1 is a RAD51 activator, stimulating binding of hRAD51 to DNA with Kd ranging from 48 nM to 107 nM in the presence of ATP or ADP and in the absence of a nucleotide cofactor, and such an effect is not via inhibiting its ATPase activity. RS-1 (20 μM) affects the length and helical pitch of hRAD51 protein-DNA complexes. RS-1 (0, 1, 5, 10, 15, 20, and 25 μM) stimulates strand assimilation activity of hRAD51. RS-1 (7.5 μM) promotes resistance of human cells to cross-linking chemotherapy[1]. RS-1 (0, 7.5, 15 μM) increases Cas9-mediated knock-in efficiencies in rabbit embryos[2].	
Solvent&Solubility	In Vitro: DMSO : ≥ 100 mg/mL (190.76 mM) H₂O : < 0.1 mg/mL (insoluble) * "≥" means soluble, but saturation unknown.	
	<table><tr><td rowspan="4">Preparing <</td></tr></table>	Preparing <
	Preparing <	

2.请依序添加每种溶剂： 10% DMSO →90% corn oil

Solubility: ≥ 3 mg/mL (5.72 mM); Clear solution

此方案可获得 ≥ 3 mg/mL (5.72 mM, 饱和度未知) 的澄清溶液，此方案不适用于实验周期在半个月以上的实验。

以 1 mL 工作液为例，取 100 μL 30.0 mg/mL 的澄清 DMSO 储备液加到 900 μL 玉米油中，混合均匀。

References	<p>[1]. 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.</p> <p>[2]. Song J, et al. RS-1 enhances CRISPR/Cas9- and TALEN-mediated knock-in efficiency. Nat Commun. 2016 Jan 28;7:10548.</p>
实验参考:	
Kinase Assay	<p>Briefly, 15 μL reaction volumes include a DNA strand exchange protein (0.8 μM) that is preincubated for 5 min at 37°C with 1 μM (nucleotide concentration) 32P-labeled oligonucleotide 306.7 in a reaction buffer containing 20 mM Hepes (pH 7.5), 1 mM DTT, 2 mM nucleotide cofactor, and 1 mM $MgCl_2$ and various concentrations of RS-1. For experimental buffer conditions that included calcium, 1 mM $CaCl_2$ is present in addition to (in the case of hRAD51) or in the place of (in the case of RecA and scRAD51) the 1 mM $MgCl_2$. Conditions with scRAD51 additionally contains 110 nM scRAD54. After this initial binding reaction, 10 μL of 19.75 μM (base pair concentration) supercoiled homologuecontaining target plasmid DNA (pRS306) is next added along with sufficient magnesium acetate to give a final concentration of 10 mM[1].</p>
References	<p>[1]. 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.</p> <p>[2]. Song J, et al. RS-1 enhances CRISPR/Cas9- and TALEN-mediated knock-in efficiency. Nat Commun. 2016 Jan 28;7:10548.</p>

源叶生物