

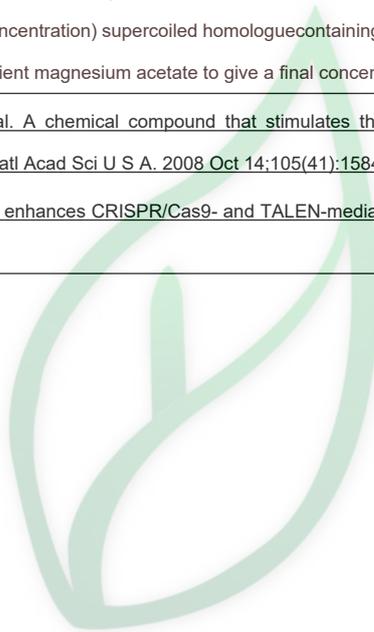
产品名称:

# 4-Bromo-N-(4-bromophenyl)-3-[[phenylmethyl]amino]sulfonyl]benzamide

产品别名: RS-1

生物活性:																									
<b>Description</b>	RS-1 is a RAD51 activator, and also increases CRISPR/Cas9-mediated knock-in efficiencies.																								
<b>IC<sub>50</sub> &amp; Target</b>	RAD51[1], CRISPR/Cas9[2]																								
<b>In Vitro</b>	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].																								
<b>Solvent&amp;Solubility</b>	<b>In Vitro:</b> DMSO : ≥ 100 mg/mL (190.76 mM) H <sub>2</sub> O : < 0.1 mg/mL (insoluble) * ">" means soluble, but saturation unknown.																								
	<table border="1"><thead><tr><th rowspan="2">Preparing</th><th>Solvent</th><th>Mass</th><th rowspan="2">1 mg</th><th rowspan="2">5 mg</th><th rowspan="2">10 mg</th></tr><tr><th>Concentration</th><th></th></tr></thead><tbody><tr><td rowspan="3">Stock Solutions</td><td>1 mM</td><td></td><td>1.9076 mL</td><td>9.5378 mL</td><td>19.0756 mL</td></tr><tr><td>5 mM</td><td></td><td>0.3815 mL</td><td>1.9076 mL</td><td>3.8151 mL</td></tr><tr><td>10 mM</td><td></td><td>0.1908 mL</td><td>0.9538 mL</td><td>1.9076 mL</td></tr></tbody></table>	Preparing	Solvent	Mass	1 mg	5 mg	10 mg	Concentration		Stock Solutions	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
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*请根据产品在不同溶剂中的溶解度选择合适的溶剂配制储备液。一旦配成溶液，请分装保存，避免反复冻融造成的产品失效。 储备液的保存方式和期限 -80°C, 6 months; -20°C, 1 month。-80°C 储存时，请在 6 个月内使用，-20°C 储存时，请在 1 个月内使用。																									
<b>In Vivo:</b> 请根据您的实验动物和给药方式选择适当的溶解方案。以下溶解方案都请先按照 <b>In Vitro</b> 方式配制澄清的储备液，再依次添加助溶剂： ——为保证实验结果的可靠性，澄清的储备液可以根据储存条件，适当保存；体内实验的工作液，建议您现用现配，当天使用；以下溶剂前显示的百分比是指该溶剂在您配制终溶液中的体积占比；如在配制过程中出现沉淀、析出现象，可以通过加热和/或超声的方式助溶																									
1.请依序添加每种溶剂： 10% DMSO→40% PEG300 →5% Tween-80 → 45% saline 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。 以 1 mL 工作液为例，取 100 μL 30.0 mg/mL 的澄清 DMSO 储备液加到 400 μL PEG300 中，混合均匀。向上述体系中加入 50 μL Tween-80，混合均匀；然后继续加入 450 μL 生理盐水定容至 1 mL。																									
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。																									

<b>References</b>	<p>[1]. <a href="#">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.</a></p> <p>[2]. <a href="#">Song J, et al. RS-1 enhances CRISPR/Cas9- and TALEN-mediated knock-in efficiency. Nat Commun. 2016 Jan 28;7:10548.</a></p>
<b>实验参考:</b>	
<b>Kinase Assay</b>	<p>Briefly, 15 <math>\mu</math>L reaction volumes include a DNA strand exchange protein (0.8 <math>\mu</math>M) that is preincubated for 5 min at 37°C with 1 <math>\mu</math>M (nucleotide concentration) <math>^{32}</math>P-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<sub>2</sub> and various concentrations of RS-1. For experimental buffer conditions that included calcium, 1 mM CaCl<sub>2</sub> 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<sub>2</sub>. Conditions with scRAD51 additionally contains 110 nM scRAD54. After this initial binding reaction, 10 <math>\mu</math>L of 19.75 <math>\mu</math>M (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>
<b>References</b>	<p>[1]. <a href="#">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.</a></p> <p>[2]. <a href="#">Song J, et al. RS-1 enhances CRISPR/Cas9- and TALEN-mediated knock-in efficiency. Nat Commun. 2016 Jan 28;7:10548.</a></p>



源叶生物