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DATASHEET

RS-1

Product overview

Name	RS-1
Cat No	HB5647
Alternative names	RS1, RAD51-Stimulatory Compound-1,
Biological action	Activator
Purity	>99%
Description	hRAD51 stimulator. Enhances CRISPR genome editing efficiency.

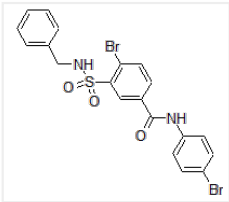
Biological Data

Biological description	Stimulator of the homologous recombination protein hRAD51. Enhances the DNA binding and homologous recombination activities of hRAD51.
	Improves efficiency of HDR (homology-directed repair) 3- to 6-fold (depending on locus and transfection method).
	Also enhances Cas9- and TALEN-mediated knock in efficiency <i>in vitro</i> and <i>in vivo</i> . Increases knock-in efficiency <i>in vitro</i> by 2- to 5-fold at different loci and achieves multi-fold improvement <i>in vivo</i> .
	Additionally promotes significant anti-tumor responses.

Solubility & Handling

Storage instructions	Room temperature
Solubility overview	Soluble in DMSO (100 mM)
Important	This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use.

Chemical Data

Chemical name	4-Bromo-N-(4-bromophenyl)-3-[[[(phenylmethyl)amino]sulfonyl]benzamide
Molecular Weight	524.2
Chemical structure	
Molecular Formula	C ₂₀ H ₁₆ N ₂ O ₃ SBr ₂
CAS Number	312756-74-4
PubChem identifier	1039737
SMILES	C1=CC=C(C=C1)CNS(=O)(=O)C2=C(C=CC(=C2)C(=O)NC3=CC=C(C=C3)Br)Br
Source	Synthetic
InChi	InChI=1S/C20H16Br2N2O3S/c21-16-7-9-17(10-8-16)24-20(25)15-6-11-18(22)19(12-15)28(26,27)23-13-14-4-2-1-3-5-14/h1-12,23H,13H2,(H,24,25)
InChiKey	SWKAVEUTKGKHSR-UHFFFAOYSA-N

MDL number
Appearance

MFCD00348720
Brown solid

References

RS-1 enhances CRISPR/Cas9- and TALEN-mediated knock-in efficiency.

Song et al (2016) Nat Commun 28

PubMedID [26817820](#)

A chemical compound that stimulates the human homologous recombination protein RAD51.

Jayathilaka et al (2008) Proc Natl Acad Sci U S A. 105(41)

PubMedID [18840682](#)

The RAD51-stimulatory compound RS-1 can exploit the RAD51 overexpression that exists in cancer cells and tumors.

Mason et al (2014) Cancer Res 74(13)

PubMedID [24753542](#)

Nuclear domain 'knock-in' screen for the evaluation and identification of small molecule enhancers of CRISPR-based genome editing.

Pinder et al (2015) Nucleic Acids Res. 43(19)

PubMedID [26429972](#)
