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Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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Lieferung & Zahlungsart

siehe unsere [Liefer- und Versandbedingungen](#)

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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PRODUCT INFORMATION



RS-1

Item No. 21037

CAS Registry No.: 312756-74-4

Formal Name: 4-bromo-N-(4-bromophenyl)-3-[[[(phenylmethyl)amino]sulfonyl]-benzamide

MF: $C_{20}H_{16}Br_2N_2O_3S$

FW: 524.2

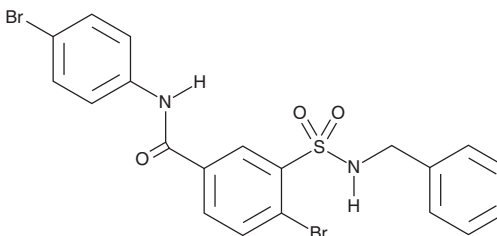
Purity: $\geq 95\%$

UV/Vis.: λ_{max} : 281 nm

Supplied as: A crystalline solid

Storage: $-20^{\circ}C$

Stability: As supplied, 2 years from the QC date provided on the Certificate of Analysis, when stored properly



Laboratory Procedures

RS-1 is supplied as a crystalline solid. A stock solution may be made by dissolving the RS-1 in the solvent of choice. RS-1 is soluble in organic solvents such as DMSO and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of RS-1 in these solvents is approximately 20 and 30 mg/ml, respectively.

RS-1 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, RS-1 should first be dissolved in DMF and then diluted with the aqueous buffer of choice. RS-1 has a solubility of approximately 0.2 mg/ml in a 1:4 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

RS-1 is an activator of DNA repair protein RAD51 ($K_d = 48-107$ for human RAD51 with different cofactors present).¹ It stimulates homologous strand assimilation activity at least 5- to 11-fold, enhancing homologous recombination activity of hRAD51.¹ RS-1 is a potent enhancer of CRISPR-mediated genome editing, increasing homology directed repair 3- to 6-fold.² It is used to increase CRISPR-mediated knock-in efficiencies *in vitro* and *in vivo*.²⁻⁴

References

1. Jayatilaka, K., Sheridan, S.D., Bold, T.D., *et al.* A chemical compound that stimulates the human homologous recombination protein RAD51. *Proc. Natl. Acad. Sci. USA* **105**(41), 15848-15853 (2008).
2. Pinder, J., Salsman, J. and Dellaire, G. Nuclear domain 'knock-in' screen for the evaluation and identification of small molecule enhancers of CRISPR-based genome editing. *Nucleic Acids Res.* **43**(19), 9379-9392 (2015).
3. Pan, Y., Shen, N., Jung-Klawitter, S., *et al.* CRISPR RNA-guided FokI nucleases repair a PAH variant in a phenylketonuria model. *Sci. Rep.* **6**, 65794 (2016).
4. Song, J., Yang, D., Xu, J., *et al.* RS-1 enhances CRISPR/Cas9- and TALEN-mediated knock-in efficiency. *Nat. Commun.* **7**, 10548 (2016).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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