RS-1

RAD51 activator / CRISPR enhancer

RS-1 is a cell-permeable sulfonamido-benzamide-based allosteric regulator. It enhances the DNA binding and recombinase activities of the human homologous recombination protein RAD51 by stabilizing its active conformation without affecting its ATP hydrolysis activity.

Key features and applications include:

- **DNA Repair Studies:** RS-1 promotes the formation of active RAD51 filaments on single-stranded DNA (ssDNA), enhancing homologous recombination efficiency.
- **Genome Editing:** It significantly increases the efficiency of CRISPR-Cas9 and TALEN-mediated genome editing by enhancing homology-directed repair (HDR).
- **Cancer Research:** RS-1 has been shown to increase the resistance of primary human neonatal dermal fibroblasts to cisplatin-induced cell death.

Relevant disease states include:

- **Cancer:** RS-1 has shown potential in promoting antitumor responses by enhancing DNA repair mechanisms, making it relevant for research into various cancers.
- **Genetic Disorders:** Its role in enhancing HDR makes it useful in studying genetic disorders where precise gene correction is needed.

Ordering Information

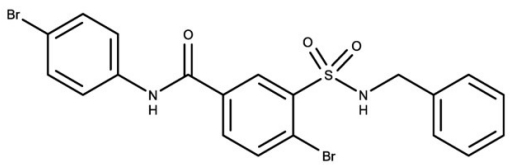
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ENZ-CHM337-0050	50mg

Manuals, SDS & CofA

View Online »

- GMP format available


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Handling & Storage

Use/Stability	As indicated on product label or CoA when stored as recommended. Solutions in DMSO may be stored at -20°C for up to 3 months.
Handling	Keep container tightly closed in a dry and well-ventilated place.
Short Term Storage	Ambient
Long Term Storage	Ambient
Shipping	Ambient Temperature

Regulatory Status

RUO - Research Use Only

Product Details

Alternative Name	4-Bromo-N-(4-bromophenyl)-3-[[(phenylmethyl)amino]sulfonyl]benzamide
Appearance	White solid.
CAS	312756-74-4
Couple Target	Rad
Couple Type	Activator
Formula	$C_{20}H_{16}Br_2N_2O_3S$
Identity	Determined by NMR.
MW	524.23
MeltingPoint	200.8-202.4°C (393.4-396.3°F)
Purity	≥99% (HPLC)
Solubility	Soluble in DMSO (30 mg/mL).

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