

Product Name: RBN-2397

Catalog No.: 9003

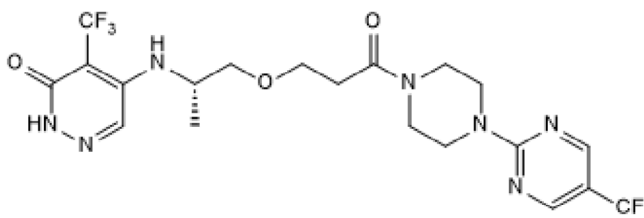
Batch No.: 1

CAS Number: 2381037-82-5

IUPAC Name: 5-[[[(1S)-1-Methyl-2-[3-oxo-3-[4-[5-(trifluoromethyl)-2-pyrimidinyl]-1-piperazinyl]propoxy]ethyl]amino]-4-(trifluoromethyl)-3(2H)-pyridazinone

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula:	C ₂₀ H ₂₃ F ₆ N ₇ O ₃
Batch Molecular Weight:	523.44
Physical Appearance:	Off White solid
Solubility:	DMSO to 50 mM ethanol to 5 mM
Storage:	Store at -20°C
Batch Molecular Structure:	



2. ANALYTICAL DATA

HPLC:	Shows 98.9% purity
¹H NMR:	Consistent with structure
Mass Spectrum:	Consistent with structure
Microanalysis:	

	Carbon	Hydrogen	Nitrogen
Theoretical	45.89	4.43	18.73
Found	45.69	4.42	18.63

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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Description:

RBN-2397 is a potent and selective PARP7 inhibitor. RBN-2397 inhibits PARP7 with an $IC_{50} < 3$ nM and $K_D = 0.22$ nM in a probe displacement assay and $IC_{50} = 1$ nM in a NanoBRET assay. It displays >500-fold selectivity over PARP12 and >50-fold selectivity over all other PARPs. RBN-2397 inhibits MARYlation of multiple intracellular proteins in PARP7-overexpressing SK-MES-1 cells with an $IC_{50} = 2$ nM, showing a 300-fold window over the inhibition of PARylation in PARP1-activated HeLa cells. It restores the Type I interferon (IFN) response in tumor cells and induces antitumor immunity dependent on Type I IFN and CD8 cells. Significantly... Please see product specific page on www.tocris.com for full description.

Physical and Chemical Properties:

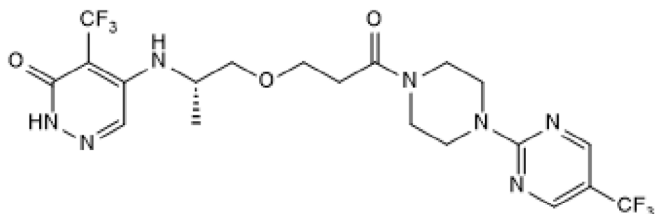
Batch Molecular Formula: $C_{20}H_{23}F_6N_7O_3$

Batch Molecular Weight: 523.44

Physical Appearance: Off White solid

Minimum Purity: ≥98%

Batch Molecular Structure:



Storage: Store at -20°C

Solubility & Usage Info:

DMSO to 50 mM

ethanol to 5 mM

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. *Unless contradicted by product-specific protocols or instructions, our standard recommendations apply:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References:

Chen et al (2025) PARP7 inhibitors and AHR agonists act synergistically across a wide range of cancer models. *Mol.Cancer.Ther* **24** 56. PMID: 39313957.

Yang et al (2023) Induction of PARP7 creates a vulnerability for growth inhibition by RBN2397 in prostate cancer cells. *Cancer Res.Comm.* **3** 592. PMID: 37077937.

Gozgit et al (2021) PARP7 negatively regulates the type I interferon response in cancer cells and its inhibition triggers antitumor immunity. *Cancer Cell* **39** 1214. PMID: 34375612.

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