

Certificate of Analysis

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Product Name: SGC 0946

Catalog No.: 4541

Batch No.: 2

CAS Number: 1561178-17-3

IUPAC Name: 1-[3-[[[(2*R*,3*S*,4*R*,5*R*)-5-(4-Amino-5-bromo-7*H*-pyrrolo[2,3-*d*]pyrimidin-7-yl)-3,4-dihydroxytetrahydrofuran-2-yl]methyl](isopropyl)amino]propyl]-3-[4-(2,2-dimethylethyl)phenyl]urea

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₂₈H₄₀BrN₇O₄·¾H₂O

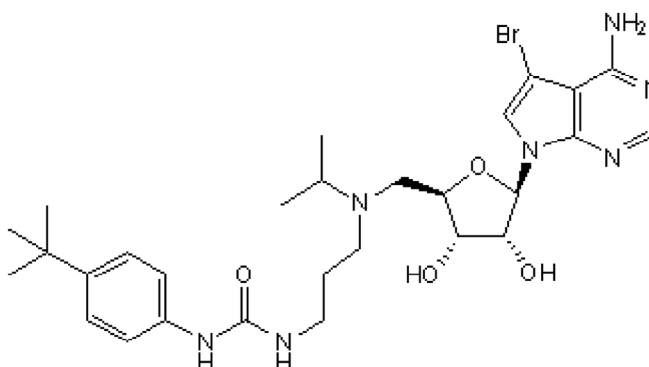
Batch Molecular Weight: 632.08

Physical Appearance: Off White solid

Solubility: DMSO to 100 mM
ethanol to 100 mM

Storage: Store at -20°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99% purity

¹H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon Hydrogen Nitrogen		
Theoretical	53.21	6.62	15.51
Found	52.84	6.55	15.26

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

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Description:

SGC 0946 is a highly potent DOT1L methyltransferase inhibitor ($K_d = 0.06$ nM, $IC_{50} = 0.3$ nM in a radioactive assay); blocks H3K79 methylation in A431 cells and MCF10A cells. Inactive at 12 histone methyltransferases and DNMT1. Selectively kills cells transformed with the MLL-AF9 fusion oncogene in an in vitro model of leukemia; lowers levels of MLL target genes HOXA9 and Meis1. Enables generation of Chemically Induced Pluripotent Stem Cells (CiPSCs) from mouse embryonic fibroblasts (MEFs) (see protocol below). To request the negative control for SGC0946, please fill out the SGC0649 request form on the SGC website. For more information ab... Please see product specific page on www.tocris.com for full description.

Physical and Chemical Properties:

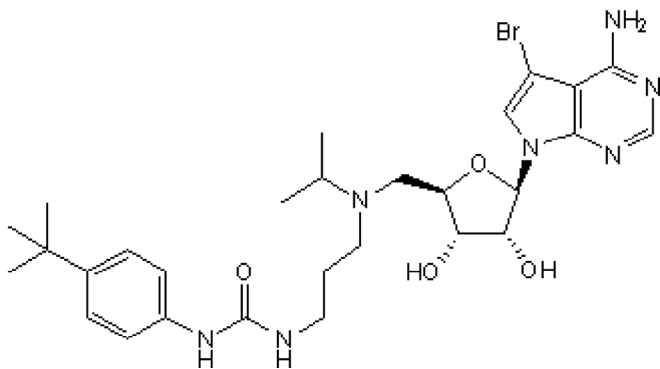
Batch Molecular Formula: $C_{28}H_{40}BrN_7O_4 \cdot \frac{3}{4}H_2O$

Batch Molecular Weight: 632.08

Physical Appearance: Off White solid

Minimum Purity: ≥98%

Batch Molecular Structure:



References:

Scheer *et al* (2019) A chemical biology toolbox to study protein methyltransferases and epigenetic signaling. *Nat.Commun.* **10** 19. PMID: 30604761.

Yu *et al* (2012) Catalytic site remodelling of the DOT1L methyltransferase by selective inhibitors. *Nat.Commun.* **3** 1288. PMID: 23250418.

Storage: Store at -20°C

Solubility & Usage Info:

DMSO to 100 mM

ethanol to 100 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.

Licensing Information:

This probe is supplied in conjunction with the Structural Genomics Consortium. For further characterization details, please visit the SGC 0946 probe summary on the SGC website.

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