bio-techne
TOCRIS

Print Date: Nov 12th 2025

Certificate of Analysis

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Product Name: **Roscovitine** **Catalog No.: 1332** **Batch No.: 3**

CAS Number: 186692-46-6

IUPAC Name: (2*R*)-2-[[9-(1-Methylethyl)-6-[(phenylmethyl)amino]-9*H*-purin-2-yl]amino]-1-butanol

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{19}H_{26}N_6O$

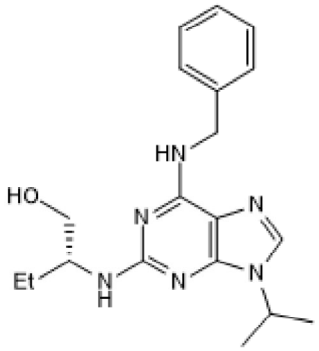
Batch Molecular Weight: 354.45

Physical Appearance: White solid

Solubility: DMSO to 100 mM
ethanol to 100 mM

Storage: Store at -20°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 98.2% purity

^{1}H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Optical Rotation: $[\alpha]_D$ = +52.2 (Concentration = 0.56, Solvent = Chloroform)

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	64.38	7.39	23.71
Found	64.42	7.45	24

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

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Description:

Roscovitine is a cyclin-dependent kinase (cdk) inhibitor. Displays sub-micromolar inhibition of cdk1, cdk2, cdk5, cdk7 and cdk9 (reported IC_{50} values range from 0.16 - 0.28 µM for cdk5 to 0.8 µM for cdk7). Selective for cdks over a wide range of related kinases including ERK1 and ERK2. Arrests L1210 cells in G1 phase. Inhibits phosphorylation of vimentin in vivo. Antimitotic.

Physical and Chemical Properties:

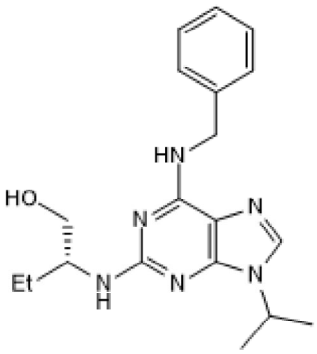
Batch Molecular Formula: $C_{19}H_{26}N_6O$

Batch Molecular Weight: 354.45

Physical Appearance: White solid

Minimum Purity: ≥98%

Batch Molecular Structure:



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.

References:

Jorda *et al* (2018) How selective are pharmacological inhibitors of cell-cycle-regulating cyclin-dependent kinases? J.Med.Chem. ***61*** 9105. PMID: 30234987.

De Azevedo *et al* (1997) Inhibition of cyclin-dependent kinases by purine analogues. Eur.J.Biochem. ***243*** 518. PMID: 9030780.

Meijer *et al* (1997) Biochemical and cellular effects of roscovitine, a potent and selective inhibitor of the cyclin-dependent kinases cdc2, cdk2 and cdk5. Eur.J.Biochem. ***243*** 527. PMID: 9030781.