

**Product Name:** Purvalanol A

**Catalog No.:** 1580

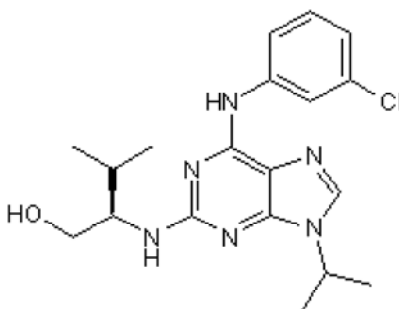
**Batch No.:** 3

CAS Number: 212844-53-6

IUPAC Name: (2*R*)-2-[[6-[(3-Chlorophenyl)amino]-9-(1-methylethyl)-9*H*-purin-2-yl]amino]-3-methyl-1-butanol

**1. PHYSICAL AND CHEMICAL PROPERTIES**

**Batch Molecular Formula:** C<sub>19</sub>H<sub>25</sub>ClN<sub>6</sub>O  
**Batch Molecular Weight:** 388.9  
**Physical Appearance:** White solid  
**Solubility:** ethanol to 50 mM  
**Storage:** Store at +4°C  
**Batch Molecular Structure:**



**2. ANALYTICAL DATA**

**TLC:** R<sub>f</sub> = 0.34 (Dichloromethane:Methanol [95:5])  
**HPLC:** Shows 99.8% purity  
**<sup>1</sup>H NMR:** Consistent with structure  
**Mass Spectrum:** Consistent with structure

**Microanalysis:**

	Carbon	Hydrogen	Nitrogen
Theoretical	58.68	6.48	21.61
Found	58.67	6.37	21.56

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**Description:**

Cyclin-dependent kinase (cdk) inhibitor (reported IC<sub>50</sub> values are 4, 4 - 70, 75 - 240 and 100 nM for cdk1, cdk2, cdk5 and cdk 7, respectively). Reversibly arrests synchronised cells in G1 and G2, and inhibits cell proliferation and cell death.

**Physical and Chemical Properties:**

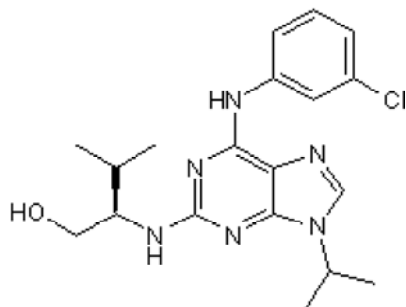
Batch Molecular Formula: C<sub>19</sub>H<sub>25</sub>ClN<sub>6</sub>O

Batch Molecular Weight: 388.9

Physical Appearance: White solid

**Minimum Purity:** ≥98%

**Batch Molecular Structure:**



**Storage:** Store at +4°C

**Solubility & Usage Info:**

ethanol to 50 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. Our standard recommendations are:

**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:**

Sold under license from the Regents of the University of California

**References:**

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

**Bain et al** (2003) The specificities of protein kinase inhibitors: an update. *Biochem.J.* **371** 199. PMID: 12534346.

**Villerbu et al** (2002) Cellular effects of purvalanol A: a specific inhibitor of cyclin-dependent kinase activities. *Int.J.Cancer* **97** 761. PMID: 11857351.

**Gray et al** (1999) ATP-site directed inhibitors of cyclin-dependent kinases. *Curr.Med.Chem.* **6** 859. PMID: 10495356.

**Gray et al** (1998) Exploiting chemical libraries, structure, and genomics in the search for kinase inhibitors. *Science* **281** 533. PMID: 9677190.

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