Catalog # 10-2868

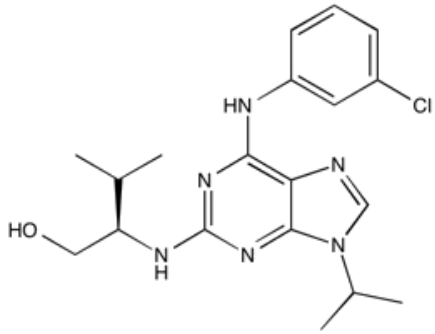
Purvalanol A

CAS# 212844-53-6

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

NG-60

Lot # X101452



Cyclin-dependent kinase inhibitor. IC_{50}s= 4, 70, 35, 75 and 850 nM for cdc2/cyclin B, cdk2/cyclin A, cdk2/cyclin E, cdk5/p35 and cdk4/cyclin D1 and respectively.[1] Reversibly arrests synchronized cells in G1 and G2 phase.[2] Induces ER stress-mediated apoptosis and autophagy in colon cancer cells.[3] Suppresses Src-mediated transformation by inhibiting both CDKs and c-Src.[4] In cells transformed with MYC, purvalanol A rapidly down-regulates survivin expression and induces MYC-dependent apoptosis.[5] Cell permeable.

1) Gray *et al*. (1998), *Exploiting chemical libraries, structure, and genomics in the search for kinase inhibitors;* Science, **281** 533
2) Villerbu *et al*. (2002), *Cellular effects of purvalanol A: a specific inhibitor of cyclin-dependent kinase activities*; Int. J. Cancer, **97** 761
3) Coker-Gurkan *et al*. (2015), *Purvalanol induces endoplasmic reticulum stress-mediated apoptosis and autophagy in a time dependent manner in HCT116 colon cancer cells*; Oncol. Rep., **33** 2761
4) Hikita *et al*. (2010), *Purvalanol A, a CDK inhibitor, effectively suppresses Src-mediated transformation by inhibiting both CDKs and c-Src*; Genes Cells, **15** 1051
5) Goga *et al*. (2007), *Inhibition of CDK1 as a potential therapy for tumors over-expressing MYC*; Nat. Med., **13** 820

PHYSICAL DATA

Molecular Weight:	388.89
Molecular Formula:	$C_{19}H_{25}ClN_6O$
Purity:	98% by HPLC
	NMR: (Conforms)
Solubility:	DMSO (up to 35 mg/ml)
Physical Description:	Pale green solid
Storage and Stability:	Store as supplied desiccated at -20°C for up to 1 year from the date of purchase. Solutions in DMSO may be stored at -20°C for up to 2 months.

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