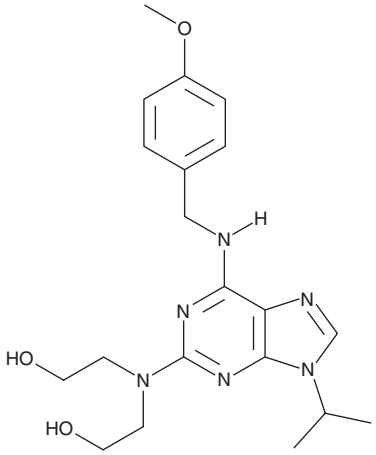
PRODUCT INFORMATION

CVT-313

Item No. 21044



CAS Registry No.:	199986-75-9
Formal Name:	2,2'-[[6-[[(4-methoxyphenyl)methyl]amino]-9-(1-methylethyl)-9H-purin-2-yl]imino]*bis*-ethanol
Synonyms:	Cdk2 Inhibitor III, Cyclin-dependent kinase 2 Inhibitor III
MF:	$C_{20}H_{28}N_6O_3$
FW:	400.5
Purity:	≥98%
UV/Vis.:	λ_{max}: 236, 293 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥4 years

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

CVT-313 is supplied as a crystalline solid. A stock solution may be made by dissolving the CVT-313 in the solvent of choice, which should be purged with an inert gas. CVT-313 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of CVT-313 in ethanol is approximately 15 mg/ml and approximately 20 mg/ml in DMSO and DMF.

CVT-313 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, CVT-313 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. CVT-313 has a solubility of approximately 0.2 mg/ml in a 1:4 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

CVT-313 is a competitive inhibitor of cyclin-dependent kinase 2 (Cdk2; IC_{50} = 0.5 µM *in vitro*).[1] It displays 8.5- and 430-fold selectivity for Cdk2 over Cdk1 and Cdk4, respectively, and has no effect on other unrelated ATP-dependent serine/threonine kinases.[1] CVT-313 induces cell cycle arrest at the G_1/S boundary.[1] CVT-313 is often used as a selective Cdk2 inhibitor, although at some concentrations and in some cells it may also inhibit Cdk1.[1-4]

References

1. Brooks, E.E., Gray, N.S., Joly, A.H., *et al.* CVT-313, a specific and potent inhibitor of CDK2 that prevents neointimal proliferation. *J. Biol. Chem.* **272(46)**, 29207-29211 (1997).
2. Bhattacharjee, R.N., Banks, G.C., Trotter, K.W., *et al.* Histone H1 phosphorylation by Cdk2 selectively modulates mouse mammary tumor virus transcription through chromatin remodeling. *Mol. Cell. Biol.* **21(16)**, 5417-54 (2001).
3. Dong, P.P., Maddali, M.V., Srimani, J.K., *et al.* Division of labour between Myc and G_1 cyclins in cell cycle commitment and pace control. *Nat. Commun.* **5**, 4750 (2014).
4. Senderowicz, A.M. and Sausville, E.A. Preclinical and clinical development of cyclin-dependent kinase modulators. *J. Natl. Cancer Inst.* **92(5)**, 376-387 (2000).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.**CAYMANCHEM**.COM