

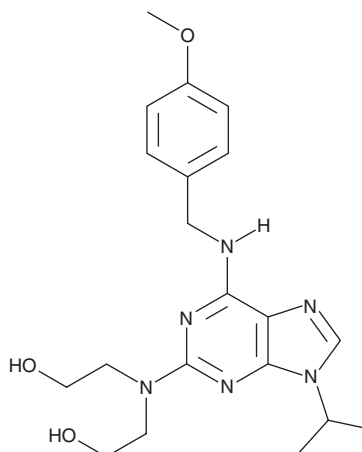
PRODUCT INFORMATION



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: C₂₀H₂₈N₆O₃
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; IC₅₀ = 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 G₁/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 G₁ 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).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 11/07/2022

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