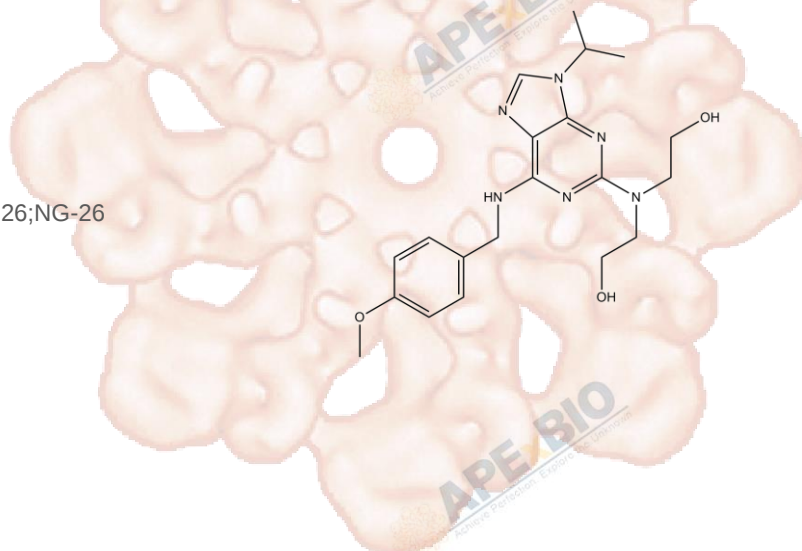


Product Data Sheet

CVT-313

Cat. No.:	A3336
CAS No.:	199986-75-9
Formula:	C ₂₀ H ₂₈ N ₆ O ₃
M.Wt:	400.47
Synonyms:	CVT 313; NG 26; CVT313; NG26; NG-26
Target:	Cell Cycle/Checkpoint
Pathway:	Cyclin-Dependent Kinases
Storage:	Store at -20°C



Solvent & Solubility

≥20 mg/mL in DMSO; insoluble in H₂O; ≥51.1 mg/mL in EtOH with gentle warming

In Vitro

	Solvent	Mass Concentration	Mass		
			1mg	5mg	10mg
Preparing Stock Solutions		1 mM	2.4971 mL	12.4853 mL	24.9707 mL
		5 mM	0.4994 mL	2.4971 mL	4.9941 mL
		10 mM	0.2497 mL	1.2485 mL	2.4971 mL

Please refer to the solubility information to select the appropriate solvent.

Biological Activity

Shortsummary

Cdk2 inhibitor

IC₅₀ & Target

In Vitro

Cell Viability Assay

Cell Line:	Human DLBCL cells
Preparation method:	The solubility of this compound in DMSO is >20 mg/mL. General tips for obtaining a higher concentration: Please warm the tube at 37 °C for 10 minutes and/or shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.
Reacting conditions:	25 μM, 24 hr

In Vivo	Applications:	CVT-313 inhibited cdk2 in several human DLBCL cells. Incubation of DLBCL cells with 25 μ M CVT-313 reduced phosphorylation of endogenous Rb on Thr821. CVT-313 (48 and 72 hr) induced cell apoptosis in human DLBCL cells in a time-dependent manner. CVT-313 treatment did not result in cell cycle arrest at 20 hr or at 48 hr. Treatment of LY3, LY8 cells and LY18 cells with CVT-313 led to parallel changes in XIAP and Mcl-1 mRNA levels. In normal and tumor human/murine cell lines, CVT-313 inhibited cell proliferation with the IC50 ranged from 1.25 to 20 μ M. CVT-313 (12.5 μ M, 18 h) induced cell arrest at the G1/S and G2/M boundary. In nonsynchronized MRC-5 cells, treatment with CVT-313 (6.25 μ M) for 36 h induced a 2 N DNA content. Treatment with CVT-313 (6.25 μ M) for 4 or 8 h after serum stimulation inhibited Rb hyperphosphorylation.
	Animal experiment	
	Animal models:	Injured rat carotid artery model of restenosis
	Dosage form:	0.75 and 0.25 mg/kg
	Applications:	In the injured rat carotid artery model of restenosis, lower doses of CVT-313 (0.75 and 0.25 mg/kg) were less efficacious, reducing mean neointimal area by about 30%, whereas the lowest dose tested (0.025 mg/kg) did not achieve any significant reduction in neointimal area. Treatment with CVT-313 for 14 days blocked restenosis in the rat carotid model.
	Other notes:	Please test the solubility of all compounds indoor, and the actual solubility may slightly differ with the theoretical value. This is caused by an experimental system error and it is normal.

Product Citations

1. Yuan J, Jiang YY, et al. "Super-Enhancers Promote Transcriptional Dysregulation in Nasopharyngeal Carcinoma." Cancer Res. 2017 Dec1;77(23):6614-6626.PMID:28951465

See more customer validations on www.apexbt.com.

References

- [1]. Faber A C, Chiles T C. Inhibition of cyclin-dependent kinase-2 induces apoptosis in human diffuse large B-cell lymphomas[J]. Cell Cycle, 2007, 6(23): 2982-2989.
- [2]. Brooks E E, Gray N S, Joly A, et al. CVT-313, a specific and potent inhibitor of CDK2 that prevents neointimal proliferation[J]. Journal of Biological Chemistry, 1997, 272(46): 29207-29211.

Caution

FOR RESEARCH PURPOSES ONLY.

NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

Specific storage and handling information for each product is indicated on the product datasheet. Most APExBIO products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Shortterm storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.

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