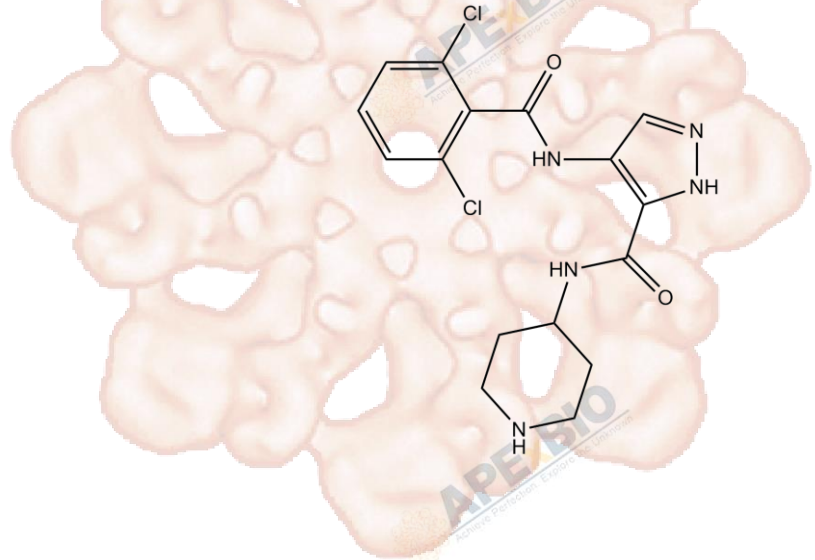


Product Data Sheet

AT7519

Cat. No.:	A5719
CAS No.:	844442-38-2
Formula:	C ₁₆ H ₁₇ Cl ₂ N ₅ O ₂
M.Wt:	382.24
Synonyms:	
Target:	Cell Cycle/Checkpoint
Pathway:	Cyclin-Dependent Kinases
Storage:	Store at -20°C



Solvent & Solubility

insoluble in H₂O; ≥3.99 mg/mL in EtOH with ultrasonic; ≥9.55 mg/mL in DMSO with gentle warming

In Vitro

Preparing Stock Solutions	Mass		1mg	5mg	10mg
	Solvent	Concentration			
		1 mM	2.6162 mL	13.0808 mL	26.1616 mL
		5 mM	0.5232 mL	2.6162 mL	5.2323 mL
		10 mM	0.2616 mL	1.3081 mL	2.6162 mL

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

Biological Activity

Shortsummary

Multi-CDK inhibitor

IC₅₀ & Target

<10 nM (CDK9/CyclinT), 13 nM (CDK5/p35), 47 nM (CDK2/CyclinA), 89 nM (GSK-3β), 100 nM (CDK4/CyclinD1), 170 nM (CDK6/CyclinD3)

In Vitro

Cell Viability Assay

Cell Line: MM(multiple myeloma) cell lines including MM.1S, MM.1R, RPMI8226 human MM cells, U266 human MM cells, Melphalan-resistant (LR5) RPMI8266 human MM cells, doxorubicin-resistant RPMI-Dox40 MM cells

Preparation method: Soluble in DMSO > 10 mM. 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:	0.5 µM for 6, 12 and 24 h
	Applications:	Anti-MM activity of AT7519 displayed potent cytotoxicity and apoptosis. AT7519 inhibited RNA polymerase II phosphorylation, associated with decreased RNA synthesis. Additionally, AT7519 inhibited glycogen synthase kinase 3 beta (GSK-3β) phosphorylation, suggesting the involvement of GSK-3β in AT7519-induced apoptosis.
In Vivo	Animal experiment	
	Animal models:	Female ICR severe combined immunodeficient mice bearing HCT116 cells xenografts
	Dosage form:	4.6 and 9.1 mg/kg/dose, twice in a 24h period, respectively at 0h, 8h, for 9 consecutive days
	Applications:	Suppression of phospho-NPM(nucleophosmin) due to the treating of AT7519 could induce an apoptotic response. AT7519 inhibited tumor growth and induced tumor cell apoptosis in human tumor xenograft models.
	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

See more customer validations on www.apexbt.com.

References

- [1]. Santo L1, Vallet S, et al, AT7519, A novel small molecule multi-cyclin-dependent kinase inhibitor, induces apoptosis in multiple myeloma via GSK-3beta activation and RNA polymerase II inhibition. *Oncogene*. 2010 Apr 22;29(16):2325-36. doi: 10.1038/onc.2009.510. Epub 2010 Jan 25.
- [2]. Squires M S, Feltell R E, et al. Biological characterization of AT7519, a small-molecule inhibitor of cyclin-dependent kinases, in human tumor cell lines. *Molecular cancer therapeutics*, 2009, 8(2): 324-332.

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 APEX BIO 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.



APExBIO Technology

www.apexbt.com

7505 Fannin street, Suite 410, Houston, TX 77054.

Tel: +1-832-696-8203 | Fax: +1-832-641-3177 | Email: info@apexbt.com

