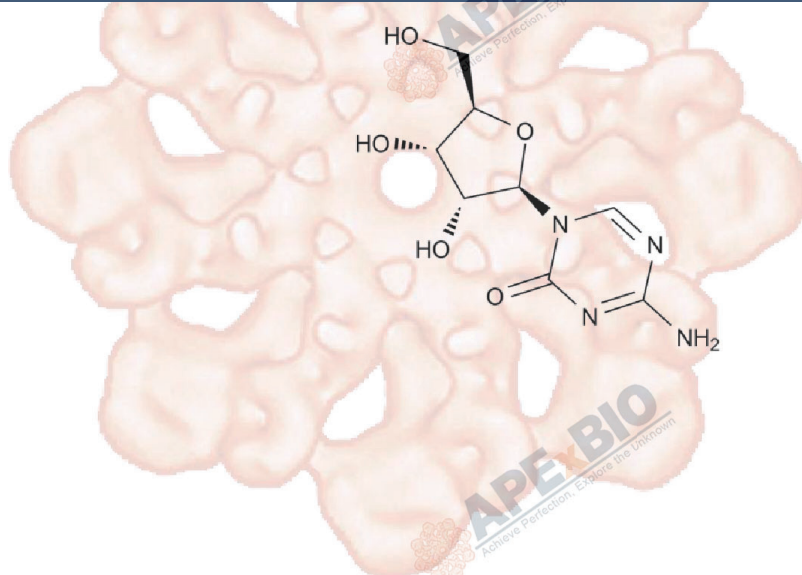


Product Data Sheet

5-Azacytidine

Cat. No.:	A1907
CAS No.:	320-67-2
Formula:	C ₈ H ₁₂ N ₄ O ₅
M.Wt:	244.2
Synonyms:	
Target:	Chromatin/Epigenetics
Pathway:	DNA Methyltransferase
Storage:	Store at -20°C



Solvent & Solubility

insoluble in EtOH; ≥24.45 mg/mL in DMSO; ≥13.55 mg/mL in H₂O with ultrasonic

In Vitro

Preparing Stock Solutions	Solvent	Mass	1mg	5mg	10mg
		Concentration			
		1 mM	4.0950 mL	20.4750 mL	40.9500 mL
		5 mM	0.8190 mL	4.0950 mL	8.1900 mL
		10 mM	0.4095 mL	2.0475 mL	4.0950 mL

Please refer to the solubility information to select the appropriate solvent

Biological Activity

Shortsummary

DNA methyltransferase inhibitor.

IC₅₀ & Target

In Vitro

Cell Viability Assay

Cell Line: Leukemia L1210 cells

Preparation method:

The solubility of this compound in DMSO is > 12.2 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:

80 μM; 0 ~ 120 mins

	Applications:	In leukemia L1210 cells, 5-Azacytidine showed greater inhibition on DNA synthesis instead of RNA synthesis. After a 90-min preincubation, TdR-3H incorporation was inhibited by about 74%, whilst UR-3H incorporation was inhibited by only 32%.
In Vivo	Animal experiment	
	Animal models:	BDF1 mice bearing lymphoid leukemia L1210 cells
	Dosage form:	3 mg/kg; i.p.; q.d.
	Applications:	In BDF1 mice bearing lymphoid leukemia L1210 cells, 5-Azacytidine increased the mean survival time. Moreover, 5-Azacytidine significantly suppressed all enzymes activity in the polyamine-biosynthetic pathway. In addition, 5-Azacytidine inhibited accumulation of polyamines in leukemic mice.
	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. Yang JR, Shi MX, et al. "LncRNA HAND2-AS1 inhibits proliferation and promotes apoptosis of chronic myeloid leukemia cells by sponging with micRNA-1275." Eur Rev Med Pharmacol Sci. 2019 Mar;23(5):2103-2111.PMID:30915755
2. Li Z, Luo J. "Epigenetic regulation of HOTAIR in advanced chronic myeloid leukemia." Cancer Manag Res. 2018 Nov 5;10:5349-5362.PMID:30464631
3. Li Z, Yang L, et al. "Long noncoding RNA MEG3 inhibits proliferation of chronic myeloid leukemia cells by sponging microRNA21." Biomed Pharmacother. 2018 May 14;104:181-192.PMID:29772439
4. Li Z, Luo J. "Research on epigenetic mechanism of SFRP2 in advanced chronic myeloid leukemia." Biochem Biophys Res Commun. 2018 Jun 18;501(1):64-72.PMID:29704505
5. Zhang X, Yang L, et al. "Research on the epigenetic regulation mechanism of the PTPN6 gene in advanced chronic myeloid leukaemia." Br J Haematol. 2017 May 8.PMID:28480959

See more customer validations on www.apexbt.com.

References

- [1]. Li LH, Olin EJ, Buskirk HH, Reineke LM. Cytotoxicity and mode of action of 5-azacytidine on L1210 leukemia. Cancer Res. 1970 Nov;30(11):2760-9.
- [2]. Heby O, Russell DH. Depression of polyamine synthesis in L1210 leukemic mice during treatment with a potent antileukemic agent, 5-azacytidine. Cancer Res. 1973 Jan;33(1):159-65.

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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