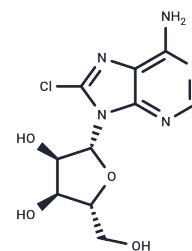


8-Chloroadenosine

Chemical Properties

CAS No. :	34408-14-5
Formula:	C ₁₀ H ₁₂ ClN ₅ O ₄
Molecular Weight:	301.69
Storage:	Powder: -20°C for 3 years In solvent: -80°C for 1 year Actual storage temperature shall be subject to the COA.



Biological Description

Description	8-Chloroadenosine (NSC-354258) is a 5' AMP-activated protein kinase agonist potentially for the treatment of chronic lymphocytic leukemia. 8-chloroadenosine activity is associated with inhibition of the mTOR pathway. 8-Chloroadenosine (NSC-354258) is a nucleoside analog; metabolized in vivo to 8-Chloro-ATP. Incorporates into RNA during transcription and inhibits RNA synthesis. Exhibits cytotoxicity in MM.1S, RPMI-8226, and U266 cancer cell lines; induces G2/M cell cycle arrest and mitotic catastrophe in A549 and H1299 cells. 8-Chloroadenosine (NSC-354258) has been shown to deplete ATP and inhibit tumor growth in hematological malignancies as well as in lung and breast cancer cell lines.
Targets(IC50)	AMPK, Autophagy

Solubility Information

Solubility	DMSO: 65 mg/mL (215.45 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.3147 mL	16.5733 mL	33.1466 mL
5 mM	0.6629 mL	3.3147 mL	6.6293 mL
10 mM	0.3315 mL	1.6573 mL	3.3147 mL
50 mM	0.0663 mL	0.3315 mL	0.6629 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Dicitore A, Grassi ES, Caraglia M, Borghi MO, Gaudenzi G, Hofland LJ, Persani L, Vitale G. The cAMP analogs have potent anti-proliferative effects on medullary thyroid cancer cell lines. *Endocrine*. 2016 Jan;51(1):101-12. doi: 10.1007/s12020-015-0597-7. PubMed PMID: 25863490.

Zhang et al (2004) Exposure of human lung cancer cells to 8-chloro-adenosine induces G2/M arrest and mitotic catastrophe. *Neoplasia* 6 802 PMID: 15720807

Stellrecht CM, Vangapandu HV, Le XF, Mao W, Shentu S. ATP directed agent, 8-chloro-adenosine, induces AMP activated protein kinase activity, leading to autophagic cell death in breast cancer cells. *J Hematol Oncol*. 2014 Mar 14;7:23. doi: 10.1186/1756-8722-7-23. PubMed PMID: 24628795; PubMed Central PMCID: PMC4007639.

Han YY, Zhou Z, Cao JX, Jin YQ, Li SY, Ni JH, An GS, Zhang YX, Jia HT. E2F1-mediated DNA damage is implicated in 8-Cl-adenosine-induced chromosome missegregation and apoptosis in human lung cancer H1299 cells. *Mol Cell Biochem*. 2013 Dec;384(1-2):187-96. doi: 10.1007/s11010-013-1797-1. PubMed PMID: 24037421.

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