

Product Data Sheet

Chemical Properties

Product Name:	SGI-110
Cas No.:	929901-49-5
M.Wt:	557.41
Formula:	C ₁₈ H ₂₄ N ₉ O ₁₀ P



Chemical Name:	[(2S,3R,5R)-5-(2-amino-6-oxo-3H-purin-9-yl)-3-hydroxyoxolan-2-yl]methyl [5-(4-amino-2-oxo-1,3,5-triazin-1-yl)-2-(hydroxymethyl)oxolan-3-yl]hydrogen phosphate
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Canonical SMILES:	C1C(C(OC1N2C=NC3=C2NC(=NC3=O)N)COP(=O)(O)OC4CC(OC4CO)N5C=NC(=NC5=O)N)O
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Solubility:	Soluble in DMSO
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Storage:	Store at -20°C
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General tips:	For obtaining a higher solubility , please warm the tube at 37 ° C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20 ° C for several months.
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Shopping Condition:	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request
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Biological Activity

Targets :	Chromatin/Epigenetics
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Pathways:	DNA Methyltransferase
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Description:

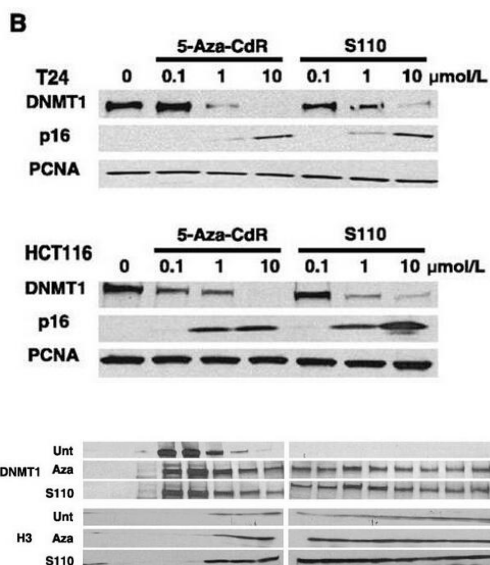
SGI-110 is a second generation DNA methyltransferase (DNMT) inhibitor that is synthesized as a

dinucleotide consisting of a deoxyguanosine (5'-DACpG-3') and 5-AZA-CdR bonds with a natural phosphodiester linkage. Unlike other DNMT inhibitors that are susceptible to rapid inactivation by cytidine deaminase (CDA), SGI-110 is highly resistant to deamination by CDA. In previous studies, SGI-110 has been demonstrated to effectively retard tumor growth in human bladder cancer xenografts through both intraperitoneal (i.p.) and subcutaneous (s.c.) administration and to exhibit epigenetic remodeling activity, in which the expression of p16 in cancer cells is restored through demethylation of the 5'-end region of the gene.

Reference:

- [1]Tellez CS1, Grimes MJ, Picchi MA, Liu Y, March TH, Reed MD, Oganesian A, Taverna P, Belinsky SA. SGI-110 and entinostat therapy reduces lung tumor burden and reprograms the epigenome. *Int J Cancer*. 2014 Mar 26. doi: 10.1002/ijc.28865. [Epub ahead of print]
- [2]Coral S1, Parisi G, Nicolay HJ, Colizzi F, Danielli R, Fratta E, Covre A, Taverna P, Sigalotti L, Maio M. Immunomodulatory activity of SGI-110, a 5-aza-2'-deoxycytidine-containing demethylating dinucleotide. *Cancer Immunol Immunother*. 2013 Mar;62(3):605-14. doi: 10.1007/s00262-012-1365-7. Epub 2012 Nov 9.
- [3]Foulks JM1, Parnell KM, Nix RN, Chau S, Swierczek K, Saunders M, Wright K, Hendrickson TF, Ho KK, McCullar MV, Kanner SB. Epigenetic drug discovery: targeting DNA methyltransferases. *J Biomol Screen*. 2012 Jan;17(1):2-17. doi: 10.1177/1087057111421212. Epub 2011 Sep 30.

Product Validation



Treatment of SGI-110 reduces DNMT1 level and increases p16 expression

Inhibition of DNMT1 in vitro by SGI-110

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.

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