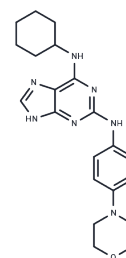


Reversine

Chemical Properties

CAS No. :	656820-32-5
Formula:	C ₂₁ H ₂₇ N ₇ O
Molecular Weight:	393.49
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	Reversine, a small synthetic purine analogue (2, 6-disubstituted purine), is a potent inhibitor of Aurora A/B/C (IC ₅₀ s=150-500 nM).
Targets(IC ₅₀)	Aurora Kinase, Adenosine Receptor, Autophagy
In vitro	In mice carrying U14 tumors, intraperitoneal injection of Reversine (10 mg/kg) effectively reduces tumor cells.
In vivo	In stably transfected Chinese hamster ovary cells, Reversine can competitively inhibit cAMP production stimulated by. In HCT116 cells, Reversine suppresses the Aurora targets and phosphorylation of histone H3. Additionally, in primary human tumor samples, Reversine is capable of inhibiting the formation of leukemia cell colonies.
Kinase Assay	Radioligand Binding Assays: Each tube in the A3 AR competitive binding assay contains 100 µL of membrane suspension (20 µg of protein), 50 µL of [125I]4-amino-3-iodobenzyladenosine-5'-N-methyluronamide (0.5 nM), and 50 µL of increasing concentrations of the test ligands in Tris-HCl buffer (50 mM, pH 7.4) containing 10 mM MgCl ₂ and 1 mM EDTA. Nonspecific binding is determined using 10 mM 5'-N-ethylcarboxamidoadenosine in the buffer. The mixtures are incubated at 25°C for 60 min. Binding reactions are terminated by filtration through Whatman GF/B filters under reduced pressure using a MT-24 cell harvester. Filters are washed three times with 9 mL of ice-cold buffer. Radioactivity is determined using a Beckman γ-counter, and the percent inhibition is calculated.
Cell Research	Cell viability of different tumor cell lines is assessed using ATPlite 1step. Briefly, 2 × 10 ⁴ cells for each well are plated in a 96-well plate in presence of crescent quantity of reversine. After 72 h, the plates are recovered and 100 µL ATPlite solution is added to each well. The plates are shaken for 2 min at 700 rpm and luminescence is measured using EnVision Multilabel plate reader. Each sample is analyzed in triplicate. (Only for Reference)

Solubility Information

Solubility	Ethanol: < 1 mg/mL (insoluble or slightly soluble), DMSO: 1 mg/mL (2.54 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
------------	---

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.5414 mL	12.7068 mL	25.4136 mL
5 mM	0.5083 mL	2.5414 mL	5.0827 mL
10 mM	0.2541 mL	1.2707 mL	2.5414 mL
50 mM	0.0508 mL	0.2541 mL	0.5083 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

- Chen S, et al. *J Am Chem Soc.* 2004, 126(2), 410-411.
- Carlos J A E G, Lima K, Coelho-Silva J L, et al. Reversine exerts cytotoxic effects through multiple cell death mechanisms in acute lymphoblastic leukemia. *Cellular Oncology.* 2020: 1-11
- Perreira M, et al. *J Med Chem.* 2005, 48(15), 4910-4918.
- Lima K, Carlos J A E G, de Melo Alves-Paiva R, et al. Reversine exhibits antineoplastic activity in JAK2 V617F-positive myeloproliferative neoplasms. *Scientific Reports.* 2019, 9(1): 9895
- D'Alise AM, et al. *Mol Cancer Ther.* 2008, 7(5), 1140-1149.
- Tan M, Ren F, Yang X. Anti-HBV therapeutic potential of small molecule 3, 5, 6, 7, 3', 4'-Hexamethoxyflavone in vitro and in vivo. *Virology.* 2021
- Qin HX, et al. *Cytotechnology.* 2013, 65(4), 643-653.
- Hirakata, Camila, et al. Targeting glioma cells by antineoplastic activity of reversine. *Oncology Letters.* 22.2 (2021): 1-9
- Lima K, Carlos J A E G, de Melo Alves-Paiva R, et al. Reversine exhibits antineoplastic activity in JAK2 V617F-positive myeloproliferative neoplasms[J]. *Scientific reports.* 2019, 9(1): 9895.
- Hirakata, Camila, et al. Targeting glioma cells by antineoplastic activity of reversine. *Oncology Letters.* 22.2 (2021): 1-9
- Carlos J A E G, Lima K, Coelho-Silva J L, et al. Reversine exerts cytotoxic effects through multiple cell death mechanisms in acute lymphoblastic leukemia[J]. *Cellular Oncology.* 2020: 1-11.
- Parducci N S, Garnique A D M B, Lima K, et al. Antineoplastic effects of pharmacological inhibitors of aurora kinases in CSF3RT618I-driven cells. *Blood Cells, Molecules, and Diseases.* 2023: 102799.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

This product is for Research Use Only · Not for Human or Veterinary or Therapeutic Use

Tel: 781-999-4286 E_mail: info@targetmol.com Address: 34 Washington Street, Wellesley Hills, MA 02481