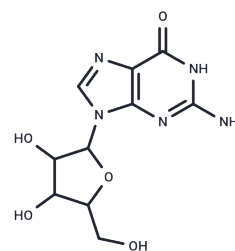


Guanosine

Chemical Properties

CAS No. :	118-00-3
Formula:	C ₁₀ H ₁₃ N ₅ O ₅
Molecular Weight:	283.24
Appearance:	no data available
Storage:	Powder: -20°C for 3 years In solvent: -80°C for 1 year



Biological Description

Description	Guanosine (DL-Guanosine) is a purine nucleoside formed from a beta-N9-glycosidic bond between guanine and a ribose ring, and is essential for metabolism.
Targets(IC50)	Endogenous Metabolite,HSV
In vitro	Guanosine is a purine nucleoside comprising guanine attached to a ribose (ribofuranose) ring via a β-N9-glycosidic bond. Guanosine can be phosphorylated to become guanosine monophosphate (GMP), cyclic guanosine monophosphate (cGMP), guanosine diphosph
Kinase Assay	Tyrosine kinase assays: The tyrosine kinase activities are determined in 96-well ELISA plates precoated with 20 µg/mL Poly (Glu,Tyr)4:1. First, 80 µL of 5 µM ATP solution diluted in kinase reaction buffer (50 mM HEPES pH 7.4, 20 mM MgCl ₂ , 0.1 mM MnCl ₂ , 0.2 mM Na ₃ VO ₄ , 1 mM DTT) is added to each well. Various concentrations of AST-1306 diluted in 10 µL of 1% DMSO (v/v) are then added to each reaction well, with 1% DMSO (v/v) used as the negative control. Subsequently, the kinase reaction is initiated by the addition of purified tyrosine kinase proteins diluted in 10 µL of kinase reaction buffer solution. Experiments at each concentration are performed in duplicate. After incubation for 60 min at 37 °C, the plate is washed three times with phosphate buffered saline (PBS) containing 0.1% Tween 20 (T-PBS). Next, 100 µL anti-phosphotyrosine antibody (PY99, 1:500 dilution) diluted in T-PBS containing 5 mg/mL BSA is added. After 30 min incubation at 37 °C, the plate is washed three times as before. Horseradish peroxidase-conjugated goat anti-mouse IgG (100 µL) diluted 1:2000 in T-PBS containing 5 mg/mL BSA is added. The plate is reincubated at 37 °C for 30 min, and then washed with PBS. Finally, 100 µL of a solution containing 0.03 % Water ₂ and 2 mg/mL o-phenylenediamine in 0.1 M citrate buffer, pH 5.5, is added and samples are incubated at room temperature until color emerged. The reaction is terminated by the addition of 50 µL of 2 M H ₂ SO ₄ , and the plate is read using a multi-well spectrophotometer at 490 nm. The inhibition rate (%) is calculated using the following equation: [1-(A ₄₉₀ treated / A ₄₉₀ control)] × 100%. IC ₅₀ values are determined from the results of at least three independent tests and calculated by Logit method.

Solubility Information

A DRUG SCREENING EXPERT

Solubility	H2O: < 1 mg/mL (insoluble or slightly soluble), DMSO: 55 mg/mL (194.18 mM),Sonication is recommended. Ethanol: < 1 mg/mL (insoluble or slightly soluble), (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.5306 mL	17.6529 mL	35.3057 mL
5 mM	0.7061 mL	3.5306 mL	7.0611 mL
10 mM	0.3531 mL	1.7653 mL	3.5306 mL
50 mM	0.0706 mL	0.3531 mL	0.7061 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.

Reference

Sáenz JB, et al. Nat Chem Biol. 2009, 5(3), 157-16

Chen J, Li T, Huang D, et al.Integrating UHPLC-MS/MS quantitative analysis and exogenous purine supplementation to elucidate the antidepressant mechanism of Chaigui granules by regulating purine metabolism.Journal of Pharmaceutical Analysis.2023

Zeng X, Shi C, Han Y, et al.A metabolic atlas of blood cells in young and aged mice identifies uridine as a metabolite to rejuvenate aged hematopoietic stem cells.Nature Aging.2024: 1-16.

Zheng M, Li J, Guo H, et al.IMPDPH inhibitors upregulate PD-L1 in cancer cells without impairing immune checkpoint inhibitor efficacy.Acta Pharmacologica Sinica.2024: 1-10.

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