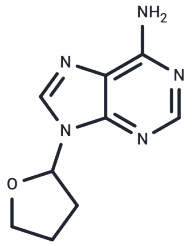
Data Sheet (Cat.No.T2172)

TargetMol

SQ22536

Chemical Properties



CAS No. : 17318-31-9

Formula: C9H11N5O

Molecular Weight: 205.22

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	SQ22536 (9-(tetrahydrofuran-2-yl)-9h-purin-6-amine) , the adenosine analogue 9-(Tetrahydro-2-furyl)adenine, inhibited adenylate cyclase activity of crude membrane preparations from catfish (Ictalurus melas) and rat isolated hepatocytes in a non-competitive manner.
Targets(IC50)	Adenylate cyclase
In vitro	SQ22536(250 μMol/L) attenuates the inhibitory effect of adenosine against ADP-induced platelet aggregation from 8±5 to 57±5%, respectively (p<0.001). SQ22536 also attenuates an increase of intraplatelet levels of cAMP by adenosine from 29±2 to 9±1 pmol/108 platelets (p<0.05). It has no effect on the platelet antiaggregant activity of inosine (1 to 4 mmol/L) and ADP-induced platelet aggregation[4].
In vivo	SQ22536 abolishes the renal protective effects of liraglutide in KK/Ta-Akita mice. the amelioration of glomerular histopathological damage by liraglutide is eliminated in KK/Ta-Akita mice treated with liraglutide in combination with SQ22536. Renal cAMP does not increase after treatment with SQ22536. In a word, the beneficial actions of liraglutide for treatment of nephropathy are inhibited by the adenylate cyclase inhibitor SQ22536[5].
Cell Research	HMC-1 cells and hCBMCs are plated in 48-well plates and serum-starved overnight. The next day, cells are preincubated with SQ22536 at the indicated concentrations for 30 min before stimulation with CRH (100 nM for HMC-1 or 1 μM for hCBMC) for 3 min in the presence or absence of SQ22536 in serum-free culture media. Cell lysates are then prepared and assayed for protein kinase A activity using ELISA.(Only for Reference)

Solubility Information

Solubility	DMSO: 10.3 mg/mL (50.19 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (9.75 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	4.8728 mL	24.3641 mL	48.7282 mL
5 mM	0.9746 mL	4.8728 mL	9.7456 mL
10 mM	0.4873 mL	2.4364 mL	4.8728 mL
50 mM	0.0975 mL	0.4873 mL	0.9746 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

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Ma L, Gong F, Xu J, et al. Uncarboxylated osteocalcin reverses the high glucose-induced inhibition of the osteogenic differentiation of MC3T3E1 cells via the GPRC6A/cAMP/PKA/AMPK signaling pathway. International Journal of Molecular Medicine. 2021 May;47(5):91. doi: 10.3892/ijmm.2021.4924. Epub 2021 Mar 31.
Zhou J, Shi Y, Yang C, et al.γ-glutamylcysteine alleviates insulin resistance and hepatic steatosis by regulating adenylate cyclase and IGF-1R/IRS1/PI3K/Akt signaling pathways.The Journal of Nutritional Biochemistry.2023: 109404.
Cao J, et al. Mol Pharmacol. 2006, 69(3):998-1006.
Xia L, et al. J Endocrinol. 2015, 224(3):225-34.
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Ma L, Gong F, Xu J, et al. Uncarboxylated osteocalcin reverses the high glucose-induced inhibition of the osteogenic differentiation of MC3T3E1 cells via the GPRC6A/cAMP/PKA/AMPK signaling pathway[J]. International Journal of Molecular Medicine. 2021, 47(5): 1-11