

TDI-10229

Chemical Properties

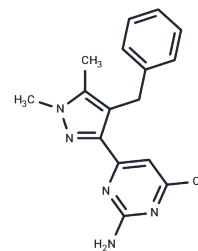
CAS No. : 2810887-45-5

Formula: C₁₆H₁₆ClN₅

Molecular Weight: 313.78

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	TDI-10229 is a potent and orally available inhibitor of soluble adenylyl cyclase (sAC, ADCY10), displaying nanomolar inhibition of sAC in both biochemical and cellular assays (IC ₅₀ = 195 nM). TDI-10229 exhibits mouse pharmacokinetic properties sufficient to warrant its use as an in vivo tool compound.
Targets(IC ₅₀)	cAMP,AChR
In vitro	TDI-10229 inhibits human 4-4 cells with an IC ₅₀ of 92 nM for[2].
In vivo	TDI-10229 (20 mg/kg; p.o.) treatment in mouse shows the AUC, C _{max} , and MRT were 94 µg h/mL, 15.5 µM, and 3.95 hours, respectively[2].

Solubility Information

Solubility	DMSO: 112.5 mg/mL (358.53 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: 4 mg/mL (12.75 mM),Sonication is recommended. <i>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.</i>

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.1869 mL	15.9347 mL	31.8695 mL
5 mM	0.6374 mL	3.1869 mL	6.3739 mL
10 mM	0.3187 mL	1.5935 mL	3.1869 mL
50 mM	0.0637 mL	0.3187 mL	0.6374 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

Balbach M, et al. Soluble adenylyl cyclase inhibition prevents human sperm functions essential for fertilization [published online ahead of print, 2021 Aug 31]. Mol Hum Reprod. 2021;gaab054.

Fushimi M, et al. Discovery of TDI-10229: A Potent and Orally Bioavailable Inhibitor of Soluble Adenylyl Cyclase (sAC, ADCY10). ACS Med Chem Lett. 2021;12(8):1283-1287. Published 2021 Jul 14.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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