

ACT-678689

Chemical Properties

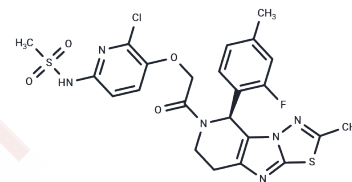
CAS No. : 1783256-96-1

Formula: C₂₃H₂₂ClFN₆O₄S₂

Molecular Weight: 565.04

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	ACT-678689 (Compound Example 1.53.4) is a tryptophan hydroxylase (TPH) inhibitor with an IC ₅₀ of 8 nM[1].
Targets(IC ₅₀)	Hydroxylase
In vitro	TPH consists of two isoforms, TPH1 and TPH2. TPH1 is primarily found in peripheral tissues, especially the enterochromaffin cells (EC) in the gut, and is vital for the synthesis of 5HT, which is stored in the circulating blood platelets[1]. Conversely, TPH2 is predominantly expressed in neuronal cell types within the central nervous system (CNS).

Solubility Information

Solubility	DMSO: 120 mg/mL (212.37 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 (7.08 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	1.7698 mL	8.8489 mL	17.6979 mL
5 mM	0.354 mL	1.7698 mL	3.5396 mL
10 mM	0.177 mL	0.8849 mL	1.7698 mL
50 mM	0.0354 mL	0.177 mL	0.354 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

Daniel Bur, et al. Tricyclic piperidine compounds. WO2015075023A1.

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