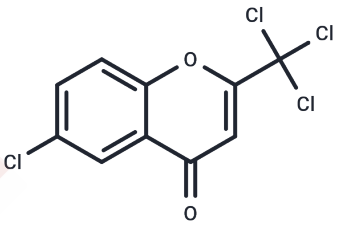
Data Sheet (Cat.No.T16938)

TargetMol

ST034307

Chemical Properties



CAS No. : 133406-29-8

Formula: C10H4Cl4O2

Molecular Weight: 297.95

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	ST034307 is an effective and selective inhibitor of adenylyl cyclase 1 (IC50: 2.3 μM).
Targets(IC50)	Adenylate cyclase
In vitro	ST034307 obviously inhibits the forskolin- or isoproterenol-stimulated AC1 activity in HEK cells stably expressing AC1. ST034307 significantly inhibits the Ca2+/calmodulin-stimulated cAMP accumulation in the hippocampal homogenates. ST034307 dose-dependently inhibits both the development and the maintenance of the MOR-mediated sensitization of AC1. ST034307 reveals selective inhibition of AC1 and potentiates AC8 activity to a nonsignificant small extent. ST034307 potentiates phorbol 12-myristate 13-acetate (PMA)-stimulated cAMP production by AC2. ST034307 has no significant effects on wild-type HEK cells [1].
In vivo	ST034307 shows an estimated median effective dose (E50) value for analgesia of 0.28 μg in the mouse pain model. ST034307 (0.25 μg) induces an obvious relief of CFA-induced inflammatory pain in mice [1].

Solubility Information

Solubility	DMSO: 51 mg/mL (171.17 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: 1 mg/mL (3.36 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	3.3563 mL	16.7813 mL	33.5627 mL
5 mM	0.6713 mL	3.3563 mL	6.7125 mL
10 mM	0.3356 mL	1.6781 mL	3.3563 mL
50 mM	0.0671 mL	0.3356 mL	0.6713 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

Brust TF, et al. Identification of a selective small-molecule inhibitor of type 1 adenylyl cyclase activity with analgesic properties. Sci Signal. 2017 Feb 21;10(467).