

BTB09089

Chemical Properties

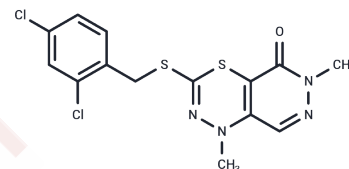
CAS No. : 245728-44-3

Formula: C₁₄H₁₂Cl₂N₄O₂

Molecular Weight: 387.31

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	BTB09089 (GPR65 agonist) is a T cell death-associated gene 8 (TDAG8/GPR65)-specific agonist. BTB09089 induces TDAG8 expression and regulates cytokine production in T cells and macrophages.
Targets(IC50)	Others, DNA, GPCR
In vitro	BTB09089 (0-18 μM; 30 min) significantly increases cAMP accumulation in HEK293 cells expressing hTDAG8 and mTDAG8, but not in control HEK293 cells. It does not enhance cAMP accumulation in HEK293 cells expressing hGPR4 or inositol phosphate accumulation in HEK293 cells expressing hOGR1.[1] BTB09089 (0-18 μM; 30 min) enhances cAMP accumulation dose-dependently at pH 7.0-7.9, but not at pH 6.5.[1] BTB09089 (1-5 μM; 20 h) inhibits IL-2 production in WT mouse splenocytes dose-dependently, without affecting IL-2 production in TDAG8 KO mice or cell viability.[1] BTB09089 (1-5 μM; 18 h) inhibits TNF-α and IL-6 production stimulated by LPS while enhancing IL-10 production in TG-PEC induced by LPS stimulation with sulfated ester.[1]
In vivo	BTB09089 (5-20 μM, 8 μL; i.c.v.; administered 6 hours prior to MCAO) reduces cerebral ischemia-reperfusion injury in rats.[2]

Solubility Information

Solubility	DMSO: 14.7 mg/mL (37.95 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Corn oil: < 1.47 mg/mL (3.8 mM), Lower concentrations may be soluble, but exact solubility limit is unknown. 10% DMSO+90% Saline: < 1.47 mg/mL (3.8 mM), Lower concentrations may be soluble, but exact solubility limit is unknown. 10% DMSO+40% PEG300+5% Tween 80+45% Saline: < 1.47 mg/mL (3.8 mM), Lower concentrations may be soluble, but exact solubility limit is unknown. 10% DMSO+90% (20% SBE-β-CD in Saline): < 1.47 mg/mL (3.8 mM), Lower concentrations may be soluble, but exact solubility limit is unknown. <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	2.5819 mL	12.9096 mL	25.8191 mL
5 mM	0.5164 mL	2.5819 mL	5.1638 mL
10 mM	0.2582 mL	1.291 mL	2.5819 mL
50 mM	0.0516 mL	0.2582 mL	0.5164 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

Onozawa Y, et al. Activation of T cell death-associated gene 8 regulates the cytokine production of T cells and macrophages in vitro. *Eur J Pharmacol.* 2012;683(1-3):325-331.

Ma XD, et al. TDAG8 activation attenuates cerebral ischaemia-reperfusion injury via Akt signalling in rats. *Exp Neurol.* 2017;293:115-123.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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