

RG-239

Chemical Properties

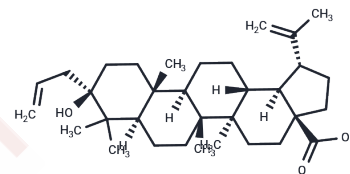
CAS No. : 1199222-56-4

Formula: C₃₃H₅₂O₃

Molecular Weight: 496.76

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	RG-239 is an orally active TGR5 agonist with an EC ₅₀ of 120 nM, significantly more potent than Betulinic acid (EC ₅₀ = 1.04 μM). It exhibits much higher selectivity for TGR5 over FXRα. The compound enhances mitochondrial activity in adipocytes and promotes neurite outgrowth at higher concentrations. Additionally, RG-239 inhibits LPS-induced iNOS expression and nitrite production in Raw264.7 cells and microglia. RG-239 is applicable for research related to type 2 diabetes.
Targets(IC50)	GPCR19
In vitro	RG-239 (Compound 18 dia 2) at a concentration of 10 μM enhances mitochondrial activity in adipocytes, demonstrated by increased cytochrome c oxidase activity in 3T3L1 fat cells. At 1 μM, RG-239 induces neurite outgrowth to 9.5 μm, which is significantly less effective than Retinoic acid (RA). However, at 10 μM, it induces a median neurite length of 37.0 μm, comparable to the effect of Deoxycholic acid (DCA) in NSC-34 cells. Additionally, RG-239 at 2 μM for 24 hours inhibits iNOS expression and nitrite production in LPS-induced Raw264.7 and microglial cells.
In vivo	RG-239 (Compound 18 dia 2), administered orally at 30 mg/kg/day for 3 weeks, can reduce plasma glucose levels in obese mice induced by a 10-week high-fat diet (60% of calories from fat). Additionally, a dosage of RG-239 at 10 mg/kg/day for 2 weeks can decrease the expression of inflammatory genes Tnfα, IL-6, and IL-1β in the liver of B6j mice subjected to the same high-fat diet.

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.013 mL	10.0652 mL	20.1304 mL
5 mM	0.4026 mL	2.013 mL	4.0261 mL
10 mM	0.2013 mL	1.0065 mL	2.013 mL
50 mM	0.0403 mL	0.2013 mL	0.4026 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.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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