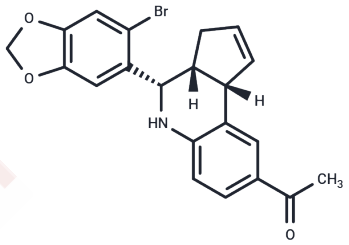
Data Sheet (Cat.No.T15364)

TargetMol

G-1

Chemical Properties



CAS No. : 881639-98-1

Formula: C21H18BrNO3

Molecular Weight: 412.28

Storage: Store at low temperature
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	G-1 is a nonsteroidal, high-affinity, and selective GPR30 agonist (Ki: 11 nM).
Targets(IC50)	Estrogen Receptor/ERR,GPCR
In vitro	Treatment with G-1 (10 μM and 100 μM; 48 and 72 h) obviously reduces cell proliferation (P<0.001). At 72 h, the IC50 value for G-1 is calculated to be 20 μM. Cell cycle analysis of H295R cells after 24 h of G-1 treatment shows a cell cycle arrest in the G2 phase. Treatment of A549 cells with G-1(20 μM) reveals a significant increase in apoptosis, consistent with its antiproliferative effect (P<0.001)[2]. The presence of G-1 increases Bax expression while reduces Bcl-2[3].
In vivo	After 14 days post-injury, the results display that the Basso mouse scale scores are obviously higher in the G-1 group compared with the other groups (P<0.05). G-1 administration produces a statistically significant induce in tumor volume from day 14 post-treatment. Grafted tumors harvested after a three-week treatment with G-1 show a significant decrease in tumor weight compare to vehicle-treated animals[3]. The number of caspase-3-positive cells in the cross-sections is counted, and G-1 group has fewer positive cells compared with the other groups (P0.05), and there is no difference between the two groups (P>0.05)[1].

Solubility Information

Solubility	H2O: < 0.1 mg/mL (insoluble), DMSO: 120 mg/mL (291.06 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: 2 mg/mL (4.85 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	2.4255 mL	12.1277 mL	24.2554 mL
5 mM	0.4851 mL	2.4255 mL	4.8511 mL
10 mM	0.2426 mL	1.2128 mL	2.4255 mL
50 mM	0.0485 mL	0.2426 mL	0.4851 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

Cheng Q, et al. G-1 exerts neuroprotective effects through G protein-coupled estrogen receptor 1 following spinal cord injury in mice. Biosci Rep. 2016 Aug 31;36(4). pii: e00373.
Zhang Y, Sun T, Zhao Z, et al.Activation of GPR30 Ameliorates Cerebral Ischemia-Reperfusion Injury by Suppressing Ferroptosis Through Nrf2/GPX4 Signaling Pathway.NeuroMolecular Medicine.2024, 26(1): 33.
Kurt AH, et al. Oxidative/antioxidative enzyme-mediated antiproliferative and proapoptotic effects of the GPER1 agonist G-1 on lung cancer cells. Oncol Lett. 2015 Nov;10(5):3177-3182.
Chimento A, et al. GPER agonist G-1 decreases adrenocortical carcinoma (ACC) cell growth in vitro and in vivo. Oncotarget. 2015 Aug 7;6(22):19190-203.