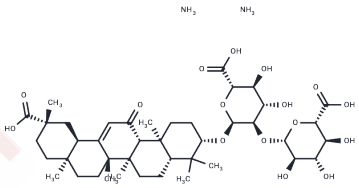
Data Sheet (Cat.No.T0522)

TargetMol

Diammonium Glycyrrhizinate

Chemical Properties



CAS No. : 79165-06-3

Formula: C42H62O16·2H3N

Molecular Weight: 857

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	Diammonium Glycyrrhizinate (Glycyrrhizin) , an extensively used anti-inflammatory agent, is isolated from the licorice root. It is metabolized to glycyrrhetinic acid, which inhibits 11-β-hydroxysteroid dehydrogenase and other enzymes involved in the metabolism of corticosteroids. Therefore, glycyrrhizic acid, the main and sweet component of licorice, has been studied for its ability to cause hypermineralocorticoidism with potassium loss and sodium retention, edema, increased blood pressure, as well as inhibited the renin-angiotensin-aldosterone system.
Targets(IC50)	NF-κB,Dehydrogenase,ROS
Kinase Assay	In vitro kinase assay [1]: Tyrosine kinase assays are performed by HTRF (KDR, VEGFR1, FGFR1, c-Met, EGFR) and ELISA (PDGFRβ), using the recombinant kinase domains of receptors. In both assays, 4 μL of serial dilutions of E7080 are mixed in a 96-well round plate with 10 μL of enzyme, 16 μL of poly (GT) solution (250 ng) and 10 μL of ATP solution (1 μM ATP) (final concentration of DMSO is 0.1%). In wells for blanks, no enzyme is added. In control wells no test article is added. The kinase reaction is initiated by adding ATP solution to each well. After 30-minute incubation at 30°C, the reaction is stopped by adding 0.5 M EDTA (10 μL/well) to the reaction mixture in each well. Dilution buffer adequate to each kinase assay is added to the reaction mixture. In the HTRF assay, 50 μL of the reaction mixture is transferred to a 96-well 1/2 area black EIA/RIA plate, HTRF solution (50 μL/well) is added to the reaction mixture, and then kinase activity is determined by measurement of fluorescence with a time-resolved fluorescence detector at an excitation wavelength of 337 nm and an emission wavelengths of 620 and 665 nm. In the ELISA, 50 μL of the reaction mixture is incubated in avidin coated 96-well polystyrene plates at room temperature for 30 minutes. After washing with wash buffer, PY20-HRP solution (70 μL/well) is added and the reaction mixture is incubated at room temperature for 30 minutes. After washing with wash buffer, TMB reagent (100 μL/well) is added to each well. After several minutes (10–30 minutes), 1 M H3PO4 (100 μL/well) is added to each well. Kinase activity is determined by measurement of absorbance at 450 nm with a microplate reader.

Solubility Information

Solubility	DMSO: 250 mg/mL (291.72 mM),Sonication is recommended. H2O: 116.7 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 (2.33 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	1.1669 mL	5.8343 mL	11.6686 mL
5 mM	0.2334 mL	1.1669 mL	2.3337 mL
10 mM	0.1167 mL	0.5834 mL	1.1669 mL
50 mM	0.0233 mL	0.1167 mL	0.2334 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

Jin J, et al. Food Chem Toxicol. 2014 Nov;73:95-104.
Zhai X, Wang S, Zhu M, et al. Antiviral Effect of Lithium Chloride and Diammonium Glycyrrhizinate on Porcine Deltacoronavirus In Vitro. Pathogens. 2019, 8(3): 144
He W, Zhai X, Su J, et al. Antiviral Activity of Germacrone against Pseudorabies Virus in Vitro[J]. Pathogens. 2019, 8 (4): 258.
He W, Zhai X, Su J, et al. Antiviral Activity of Germacrone against Pseudorabies Virus in Vitro. Pathogens. 2019, 8 (4): 258
Zhai X, Wang S, Zhu M, et al. Antiviral Effect of Lithium Chloride and Diammonium Glycyrrhizinate on Porcine Deltacoronavirus In Vitro[J]. Pathogens. 2019, 8(3): 144.