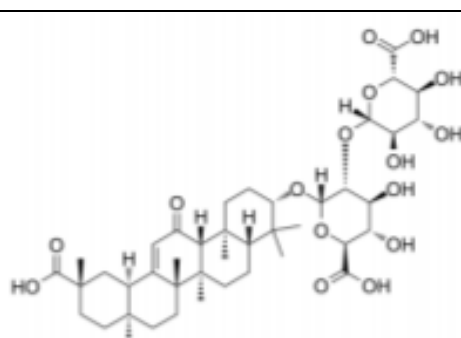


Glycyrrhizic acid >98%

Cat# C5056– 50 mg

Storage under -20°C

INTFORMATION

Product Name	Glycyrrhizic acid
Cat NO.	C5056
Size	50 mg
Description	Glycyrrhizic acid is a triterpenoid saponinl, acting as a direct HMGB1 antagonist, with anti-tumor, anti-diabetic activities.
In Vitro	Glycyrrhizic acid shows a series of anti-cancer-related pharmacological activities, such as broad-spectrum anti-cancer ability, resistance to the tissue toxicity caused by chemotherapy and radiation, drug absorption enhancing effects and anti-multidrug resistance (MDR) mechanisms, as a carrier material in drug delivery systems[1]. In intestinal NCI-H716 cells that secretes GLP-1, Glycyrrhizic acid promotes GLP-1 secretion with a marked elevation of calcium levels. Glycyrrhizic acid can enhance GLP-1 secretion through TGR5 activation[2] .
In Vivo	In type 1-like diabetic rats induced by streptozotocin (STZ-treated rats), Glycyrrhizic acid increases the level of plasma GLP-1, which is blocked by triamterene at a dose sufficient to inhibit Takeda G-protein-coupled receptor 5 (TGR5)[1] . Glycyrrhizic acid (Glycyrrhizic acid; 50 mg/kg, i.p.) significantly decreases the levels of TgAb, HMGB1, TNF- α , IL-6, IL-1 β in mice[3] .
Molecular Formulation	C ₄₂ H ₆₂ O ₁₆
Molecular Weight	822.93
Target	Virus Protease
Pathway	Anti-infection
Image	

STORAGE

Powder	-20°C	3 years
	4°C	2 years
In solvent -	-80°C	6 months
	-20°C	1 month

SOLVENT & SOLUBILITY

In vitro	DMSO : ≥ 100 mg/mL (121.52 mM)				
	H ₂ O : < 0.1 mg/mL (insoluble)				
			1 mg	5 mg	10 mg
	Preparing	1 mM	1.2152 mL	6.0759 mL	12.1517 mL
	Stock Solutions	5 mM	0.2430 mL	1.2152 mL	2.4303 mL
	10 mM	0.1215 mL	0.6076 mL	1.2152 mL	
Please refer to the solubility information to select the appropriate solvent.					
In vivo	1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 10 mg/mL (12.15 mM); Clear solution				
	2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE- β -CD in saline) Solubility: ≥ 10 mg/mL (12.15 mM); Clear solution				
	3. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 10 mg/mL (12.15 mM); Clear solution				
	4. Add each solvent one by one: 10% DMSO >> 90% saline Solubility: 10 mg/mL (12.15 mM); Clear solution; Need ultrasonic and warming				

PROTOCOL

Animal Administration [3]	Mice[3] NOD.H-2h4 mice are fed in the animal house until 4 weeks of age. A total of 24 male mice are then randomly separated into three different groups (n=8 per group). Mice in the control group are given sterile water without supplement. Mice in the iodine supplement (NaI) group are given 0.005% NaI in the drinking water. Mice in the NaI+Glycyrrhizic acid group are treated with 50 mg/kg Glycyrrhizic acid once daily for 4 weeks, administered via intraperitoneal injection after 8 weeks of iodine supplementation. Thyroid tissues are removed surgically under anesthesia, washed with cold saline, blotted on filter paper and weighed using an electronic balance. The thyroid gland tissues are then stored at -80°C until use[3]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
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CUSTOMER VALIDATION

- Aging (Albany NY). 2019 Jul 7;11(13):4323-4337.
- ACS Chem Neurosci. 2020 Feb.

REFERENCES

[1]. Su X, et al. Glycyrrhizic acid: A promising carrier material for anticancer therapy. Biomed Pharmacother. 2017 Sep 5;95:670-678

[2]. Wang LY, et al. Glycyrrhizic acid increases glucagon like peptide-1 secretion via TGR5 activation in type 1-like diabetic rats. Biomed Pharmacother. 2017 Sep 4;95:599-604.

[3]. Li C, et al. Glycyrrhizin, a Direct HMGB1 Antagonist, Ameliorates Inflammatory Infiltration in a Model of Autoimmune Thyroiditis via Inhibition of TLR2- HMGB1 Signaling. Thyroid. 2017 May;27(5):722-731.

PRODUCT USE LIMITATION

These products are intended for research use only.