Dipotassium glycyrrhizinate

Cat. No.: HY-N0184A

CAS No.: 68797-35-3

Molecular Formula: $C_{42}H_{60}K_2O_{16}$

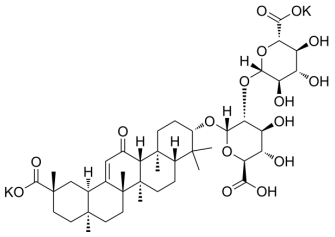
Molecular Weight: 899.11

Target: Virus Protease

Pathway: Anti-infection

Storage: 4°C, sealed storage, away from moisture

* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro

H_2O : 50 mg/mL (55.61 mM; Need ultrasonic)

DMSO : 20.83 mg/mL (23.17 mM; ultrasonic and warming and heat to 60°C)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	1.1122 mL	5.5611 mL	11.1221 mL
5 mM	0.2224 mL	1.1122 mL	2.2244 mL
10 mM	0.1112 mL	0.5561 mL	1.1122 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: PBS
   Solubility: 100 mg/mL (111.22 mM); Clear solution; Need ultrasonic

BIOLOGICAL ACTIVITY

Description

Dipotassium glycyrrhizinate is a HMGB1 inhibitor, inhibits atopic dermatitis-related gene expression with anti-anti-inflammatory activity[1][2][3].

In Vitro

Dipotassium glycyrrhizinate (0-400 μM, 4 days) inhibits mRNA level of atopic dermatitis related genes (NELL2, CA2, AQP3, and HAS3 gene level) in IL□4□ and IL□13□induced keratinocytes[1].

Dipotassium glycyrrhizinate (0-400 μM, 4 days) partially repaired the atopic dermatitis-like phenotype (the spongiosis like intercellular spaces) in the IL-4/IL-13-induced AD-like skin equivalent model[1].

Dipotassium glycyrrhizinate (0-100 μM, 24 h) inhibits Sunitinib-induced autophagy, cardiomyocyte death in CCC-HEH-2 cells [4].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

Dipotassium glycyrrhizinate (150 mg/kg, i.p.) reduces plasma glucose and increases plasma GLP-1 in Streptozotocin (65 mg/kg, i.p.) induced type 1-like diabetic rats[2].

Dipotassium glycyrrhizinate (50 mg/kg, i.p., once daily for 4 weeks) inhibits thyroiditis in the Iodine-induced murine model of autoimmune thyroiditis[3].
Dipotassium glycyrrhizinate (50-200 mg/kg, i.p.,) inhibits Bleomycin (HY-108345)-induced pulmonary fibrosis IN rats[5].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Iodine-induced murine model of autoimmune thyroiditis[3]
Dosage:	50 mg/kg
Administration:	i.p., once daily for 4 weeks
Result:	Reduced serum levels of TgAb, HMGB1, TNF-α, IL-6, IL-1β. Decreased The prevalence of thyroiditis and the infiltration of lymphocytes, and attenuated the severity of thyroiditis.

CUSTOMER VALIDATION

- Adv Healthc Mater. 2023 Aug 21;e2301808.
- Cell Prolif. 2020 Jun;53(6):e12829.
- Cell Commun Signal. 2023 May 1;21(1):86.
- J Funct Foods. 2021, 104584.
- Front Cell Dev Biol. 2020 Aug 11;8:713.

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REFERENCES

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

[2]. 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.

[3]. Xu Z, et al. Autophagic degradation of CCN2 (cellular communication network factor 2) causes cardiotoxicity of sunitinib. Autophagy. 2022 May;18(5):1152-1173.

[4]. Gao L, et al. Glycyrrhizic acid alleviates bleomycin-induced pulmonary fibrosis in rats. Front Pharmacol. 2015 Oct 1;6:215.

[5]. Lee SH, et al. Ameliorating effect of dipotassium glycyrrhizinate on an IL-4- and IL-13-induced atopic dermatitis-like skin-equivalent model. Arch Dermatol Res. 2019 Mar;311(2):131-140.

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