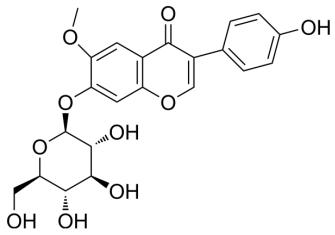
Glycitin

Cat. No.:	HY-N0012
CAS No.:	40246-10-4
Molecular Formula:	$C_{22}H_{22}O_{10}$
Molecular Weight:	446.4
Target:	Bacterial
Pathway:	Anti-infection
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 2 years -20°C 1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 100 mg/mL (224.01 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	2.2401 mL	11.2007 mL	22.4014 mL
5 mM	0.4480 mL	2.2401 mL	4.4803 mL
10 mM	0.2240 mL	1.1201 mL	2.2401 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: ≥ 2.5 mg/mL (5.60 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (5.60 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (5.60 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Glycitin (Glycitein 7-O-β-glucoside) is a natural isoflavone with antibacterial, antiviral, anticancer, anti-inflammation, anti-aging and estrogenic effects. Glycitin may regulate osteoblasts through TGF-β or AKT signaling pathways in bone marrow stem cells (BMSCs)[1][2].

In Vitro

Glycitin (0.01-10 μM; 7 days) increases cell proliferation and promoted osteoblast formation from BMSCs[1].
Glycitin (0, 0.5, 1 and 5 μM) activates the gene expression of Col I and ALP in BMSCs. Glycitin suppresses protein expression

of TGF-β and AKT in BMSCs[1].

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

Cell Viability Assay[1]

Cell Line:	Bone marrow stem cells (BMSCs)
Concentration:	0.01, 0.5, 1, 5 and 10 μM
Incubation Time:	7 days
Result:	Increased cell proliferation and promoted osteoblast formation from BMSCs.

In Vivo

Glycitin (5-20 mg/kg; intraperitoneal injection; three times (once every 8 h)) could protect lung tissues from LPS-induced inflammation via inhibiting TLR4-mediated NF-κB and MAPKs signaling pathways[2].

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

Animal Model:	BALB/c male mice (6-8 weeks old, 18-22 g weight) treated with LPS[2]
Dosage:	5 mg/kg, 10 mg/kg and 20 mg/kg
Administration:	Intraperitoneal injection; three times (once every 8 h)
Result:	Obviously alleviated the lung injury induced by LPS.

REFERENCES

[1]. Yu Chen, et al. Glycitin alleviates lipopolysaccharide-induced acute lung injury via inhibiting NF-κB and MAPKs pathway activation in mice. Int Immunopharmacol. 2019 Oct:75:105749.

[2]. Zhang L, et al. Glycitin regulates osteoblasts through TGF-β or AKT signaling pathways in bone marrow stem cells. Exp Ther Med. 2016 Nov;12(5):3063-3067.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA