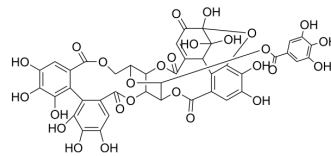


Geraniin

Cat. No.:	HY-N0472
CAS No.:	60976-49-0
Molecular Formula:	C ₄₁ H ₂₈ O ₂₇
Molecular Weight:	952.64
Target:	TNF Receptor
Pathway:	Apoptosis
Storage:	4°C, sealed storage, away from moisture and light * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture and light)



SOLVENT & SOLUBILITY

In Vitro	DMSO : 100 mg/mL (104.97 mM; Need ultrasonic)					
	Preparing Stock Solutions	Solvent Concentration	Mass	1 mg	5 mg	10 mg
			1 mM	1.0497 mL	5.2486 mL	10.4971 mL
			5 mM	0.2099 mL	1.0497 mL	2.0994 mL
			10 mM	0.1050 mL	0.5249 mL	1.0497 mL
Please refer to the solubility information to select the appropriate solvent.						
In Vivo	<ol style="list-style-type: none"> Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 2.5 mg/mL (2.62 mM); Clear solution Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (2.62 mM); Clear solution Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.5 mg/mL (2.62 mM); Clear solution 					

BIOLOGICAL ACTIVITY

Description	Geraniin is a TNF-α releasing inhibitor with numerous activities including anticancer, anti-inflammatory, and anti-hyperglycemic activities, with an IC ₅₀ of 43 μM.
IC ₅₀ & Target	IC ₅₀ : 43 μM (TNF-α) ^[1] .
In Vitro	The IC ₅₀ value of TNF-α release inhibition is 43 μM for Geraniin ^[1] . Geraniin has long been used as a medicinal herb and possesses numerous activities including anticancer, anti-inflammatory, and anti-hyperglycemic activities. Geraniin significantly decreases the viability of OVCAR3 and SKOV3 cells in a concentration-dependent fashion. The IC ₅₀ value for

Geraniin treatment is $34.5 \pm 2.8 \mu\text{M}$ in OVCAR3 cells and $23.6 \pm 1.9 \mu\text{M}$ in SKOV3 cells. However, Geraniin up to the maximal concentration used ($80 \mu\text{M}$) has no significant impact on the viability of normal human ovarian surface epithelial cells. Treatment with 10 and $40 \mu\text{M}$ of Geraniin for 48 h causes a significant increase in apoptosis ($16.8 \pm 1.2\%$ and $22.6 \pm 1.4\%$, respectively), compared with control OVCAR3 cells ($3.9 \pm 1.1\%$). Similar results are observed in SKOV3 cells^[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

Treatment with Geraniin prior to application of okadaic acid delays development of tumors compared with control group, reduces the percentage of tumor bearing mice from 80.0% to 40.0%, and reduces the average numbers of tumor per mouse from 3.8 to 1.1 in week 20. It is also showed that oral administration of Geraniin to rats (50 mg/kg/d or 100 mg/kg/d) inhibit the elevation of serum total cholesterol, lipid peroxide, free fatty acid, triglyceride, glutamic oxaloacetic transaminase and glutamic pyruvic transaminase induced by treatment with peroxidized oil^[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

PROTOCOL

Cell Assay ^[2]

Human ovarian cancer cell lines OVCAR3 and SKOV3 are used. Cells are exposed to different concentrations (5, 10, 20, 40, and $80 \mu\text{M}$) of Geraniin for 48 h and examined for viability, apoptosis, and gene expression. The concentration range is selected based on previous studies^[2].

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

CUSTOMER VALIDATION

- J Transl Med. 2021 Dec 7;19(1):497.
- J Chromatogr A. 24 December 2021, 462784.

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REFERENCES

[1]. Okabe S, et al. New TNF- α releasing inhibitors, geraniin and corilagin, in leaves of *Acer nikoense*, Megusurino-ki. Biol Pharm Bull. 2001 Oct;24(10):1145-8.

[2]. Wang X, et al. Geraniin suppresses ovarian cancer growth through inhibition of NF- κB activation and downregulation of Mcl-1 expression. J Biochem Mol Toxicol. 2017 Sep;31(9).

Caution: Product has not been fully validated for medical applications. For research use only.

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