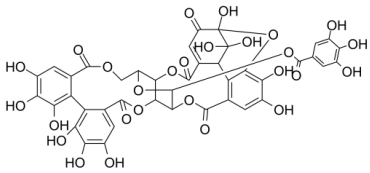
Data Sheet

Product Name:	Geraniin
Cat. No.:	CS-0008997
CAS No.:	60976-49-0
Molecular Formula:	C41H28O27
Molecular Weight:	952.64
Target:	TNF Receptor
Pathway:	Apoptosis
Solubility:	DMSO : 100 mg/mL (104.97 mM; Need ultrasonic)



BIOLOGICAL ACTIVITY:

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. IC50 & Target: IC50: 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±2.8 μM in OVCAR3 cells and 23.6±1.9 μM in SKOV3 cells. However, Geraniin up to the maximal concentration used (80 μM) has no significant impact on the viability of normal human ovarian surface epithelial cells. Treatment with 10 and 40 μM of Geraniin for 48 h causes a significant increase in apoptosis (16.8±1.2% and 22.6±1.4%, respectively), compared with control OVCAR3 cells (3.9±1.1%). Similar results are observed in SKOV3 cells[2]. **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].

PROTOCOL (Extracted from published papers and Only for reference)

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 μM) of Geraniin** for 48 h and examined for viability, apoptosis, and gene expression. The concentration range is selected based on previous studies[2].

References:

[1]. Okabe S, et al. New TNF-alpha 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).

CAIndexNames:

β-D-Glucopyranose, cyclic 2→7:4→5-(3,6-dihydro-2,9,10,11,11-pentahydroxy-3-oxo-2,6-methano-2H-1-benzoxocin-5,7-dicarboxylate) cyclic 3,6-(4,4',5,5',6,6'-hexahydroxy[1,1'-biphenyl]-2,2'-dicarboxylate) 1-(3,4,5-trihydroxybenzoate), stereoisomer

SMILES:

O=C(OC[C@H](O[C@@H](OC(C1=CC(O)=C(O)C(O)=C1)=O)[C@H]2OC3=O)[C@H](OC(C(C4C5=C3C=C(O)C(O)=C5OC6(O)C4(O)O)=CC6=O)=O)[C@H]2O7)C8=CC(O)=C(O)C(O)=C8C9=C(O)C(O)=C(O)C=C9C7=O

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

Tel: 732-484-9848 Fax: 888-484-5008 E-mail: sales@ChemScene.com

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