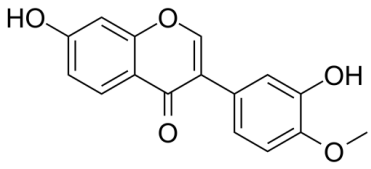
Data Sheet

Product Name:	Calycosin
Cat. No.:	CS-3715
CAS No.:	20575-57-9
Molecular Formula:	C16H12O5
Molecular Weight:	284.26
Target:	Apoptosis
Pathway:	Apoptosis
Solubility:	DMSO : ≥ 28 mg/mL (98.50 mM)



BIOLOGICAL ACTIVITY:

Calycosin (Cyclosin) is a natural active compound with anti-oxidative and anti-inflammation activity. IC50 value: Target: in vitro: calycosin had obvious anti-proliferation effects on SKOV3 cells in a dose- and time-dependent manner. calycosin up-regulated the Bax/Bcl-2 ratio and cleaved caspase-3, cleaved caspase-9 expression in a dose-dependent manner. In summary, calycosin might exert anti-growth and induce-apoptosis activity against ovarian cancer SKOV3 cells through activating caspases and Bcl-2 family proteins, therefore presenting as a promising therapeutic agent for the treatment of ovarian cancer [1]. Both calycosin and genistein inhibited proliferation and induced apoptosis in MCF-7 breast cancer cells, especially after treatment with calycosin. Treatment of MCF-7 cells with calycosin or genistein resulted in decreased phosphorylation of Akt, and decreased expression of its downstream target, HOTAIR [2]. incubation of calycosin resulted in enhanced expression ERβ in MCF-7 and T-47D cells, rather than MDA-231 and MDA-435 cells. Moreover, with the upregulation of ERβ, successive changes in downstream signaling pathways were found, including inactivation of insulin-like growth factor 1 receptor (IGF-1R), then stimulation of p38 MAPK and suppression of the serine/threonine kinase (Akt), and finally poly(ADP-ribose) polymerase 1 (PARP-1) cleavage [3]. in vivo: calycosin stimulated a dramatic increase in uterine weight and downregulated the level of ERα protein in OVX mice [4].

References:

[1]. Zhou Y, et al. Calycosin induces apoptosis in human ovarian cancer SKOV3 cells by activating caspases and Bcl-2 family proteins. Tumour Biol. 2015 Feb 12.

[2]. Chen J, et al. Calycosin and genistein induce apoptosis by inactivation of HOTAIR/p-Akt signaling pathway in human breast cancer MCF-7 cells. Cell Physiol Biochem. 2015;35(2):722-8.

[3]. Chen J, et al. Calycosin suppresses breast cancer cell growth via ERβ-dependent regulation of IGF-1R, p38 MAPK and PI3K/Akt pathways. PLoS One. 2014 Mar 11;9(3):e91245.

[4]. Chen J, et al. Calycosin promotes proliferation of estrogen receptor-positive cells via estrogen receptors and ERK1/2 activation in vitro and in vivo. Cancer Lett. 2011 Sep 28;308(2):144-51.

CAIndexNames:

4H-1-Benzopyran-4-one, 7-hydroxy-3-(3-hydroxy-4-methoxyphenyl)-

SMILES:

O=C1C(C2=CC=C(OC)C(O)=C2)=COC3=CC(O)=CC=C13

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

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