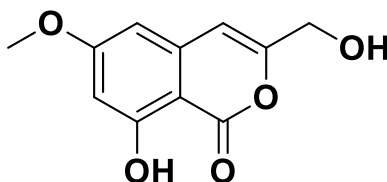


PRODUCT DATA SHEET

Cytogenin

(Antitumor, immunomodulator, angiogenesis inhibitor, anti-inflammatory, anti-arthritis, anti-diabetic)



Specifications

Code No.	: 16331
CAS#	: 132971-59-6
Molecular Formula	: C ₁₁ H ₁₀ O ₅
Molecular Weight	: 222.196
Source	: Chemically synthesized
Supplied as	: Powder
Purity	: >98 % (HPLC)
Long Term Storage	: at -20 °C
Solubility	: Soluble in acetone, acetonitrile and DMSO Insoluble in H ₂ O

The chemical structure was confirmed by NMR and HRMS.

Application Notes

Cytogenin was first isolated from fermentation broth of *Streptovercillium eurocidicum* MI43-37F11 as an immunomodulative antitumor substance.¹⁻²⁾ Total synthesis of cytogenin was also performed.³⁾ It showed antitumor activity against Ehrlich carcinoma and IMC carcinoma in mice by oral administration.^{1-2, 4)} Cytogenin showed weak cytotoxicity against L1210 and other cancer cells at 50-100 µg/ml, and it was not toxic to mice at 200 mg/kg (po).¹⁾ Cytogenin had an anti-inflammatory activity against collagen-induced arthritic model in mice.⁵⁾ It had anti-diabetic effect using streptozotocin-induced diabetes in mice.⁶⁾ Cytogenin suppressed angiogenesis induced by malignant tumor cells, S-180, in a mouse dorsal air sac assay system.⁷⁾

References

- 1) Cytogenin, a novel antitumor substance. Kumagai H, *et al. J Antibiot.* 1990 **43**(11) 1505-1507.
- 2) Antitumor activity of cytogenin. Kumagai H, *et al. J Antibiot.* 1995 **48**(2) 175-178.
- 3) Production of antibiotic MI43-37F11 and production intermediate. Yoshioka T, *et al. Japan patent* JPH04112884A.
- 4) Action of cytogenin on lymphoid cells and their cytokine production. Kumagai H, *et al. J Antibiot.* 1995 **48**(4) 317-320.
- 5) Effects of cytogenin, a novel anti-arthritis agent, on type II collagen-induced arthritis in DBA/1J mice and adjuvant arthritis in Lewis rat. *Int J Tiss Reac.* 1994 **16** 155-162.
- 6) Effect of cytogenin, a novel immunomodulator, on streptozotocin-induced diabetes in mice. Kumagai H, *et al. J Antibiot.* 2005 **58**(3) 202-205.
- 7) Effects of cytogenin, a novel microbial product, on embryonic and tumor cell-induced angiogenic responses *in vivo*. Oikawa T, *et al. Anticancer Res.* 1997 **17**(3C) 1881-1886.