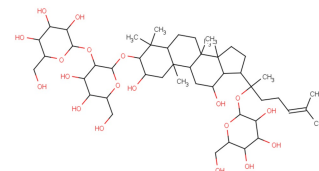


Gypenoside XLVI

Chemical Properties

CAS No.:	94705-70-1
Formula:	C ₄₈ H ₈₂ O ₁₉
Molecular Weight:	963.16
Appearance:	N/A
Storage:	0-4°C for short term (days to weeks), or -20°C for long term (months).



Biological Description

Description	Gypenoside XLVI shows strong cytotoxic activity against A549 cells, with the IC ₅₀ values of 52.63±8.31 µg/ml.
Targets(IC ₅₀)	Others: None
In vitro	Gynostemma pentaphyllum (Thunb.) Makino is one of the well-known traditional Chinese herbal medicines, which has been demonstrated to be effective against chronic diseases, such as lung cancer. In the present study, seven dammarane-type compounds were isolated from the raw, heat processed and alkaline hydrolyzed G. Pentaphyllum and compared for their cytotoxic activities against non-small cell lung carcinoma A549 cells using MTT cytotoxicity assay. METHODS AND RESULTS: By means of chemical and spectroscopic methods, their structures were established as gypenoside LVI, Gypenoside XLVI, gypenoside L, gypenoside LI, damulin A, damulin B and 20S-dammar-24-en-2α, 3β, 12β, 20-tetrol. Gypenoside LVI, Gypenoside XLVI, gypenoside L, gypenoside LI, damulin A, damulin B and 20S-dammar-24-en-2α,3β,12β,20-tetrol all showed strong cytotoxic activity against A549 cells, with the IC ₅₀ values of 105.89±2.48, 52.63±8.31, 34.94±4.23, 50.96±9.55, 26.98±0.51, 4.56±0.58, 12.54±0.53 µg/ml respectively, whereas the IC ₅₀ value of 20S-Rg3 (positive control) was 55.36±3.20 µg/ml. Comparing their structures with cytotoxic activity, these compounds might possess some kind of structure-activity relationship. CONCLUSIONS: Based on the structure and cytotoxic activity relationships of these seven constituents, the OH group in C-2, the double bond in C20(21) and C20(22) positions, the connected sugar number and the configuration in C-20 were important for cytotoxic activity against A549 cells.

Solubility Information

Solubility	< 1 mg/ml refers to the product slightly soluble or insoluble
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.038 mL	5.191 mL	10.382 mL
5 mM	0.208 mL	1.038 mL	2.076 mL
10 mM	0.104 mL	0.519 mL	1.038 mL
50 mM	0.021 mL	0.104 mL	0.208 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. The storage conditions and period of the stock solution: - 80 °C for 6 months; - 20 °C for 1 month. Please use it as soon as possible.

Reference

1. Cytotoxic activity of gypenosides and gynogenin from *Gynostemma pentaphyllum* against A549 cells. *Faseb J.*, 2014, 28(1).

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