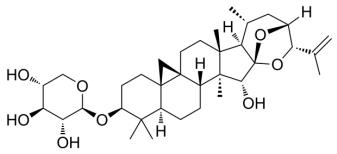
Cimiside E

Cat. No.:	HY-N10018
CAS No.:	154822-57-8
Molecular Formula:	$C_{35}H_{54}O_8$
Molecular Weight:	602.8
Target:	Caspase
Pathway:	Apoptosis
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

Cimiside E (25-Anhydrocimigenol xyloside) is a triterpene xyloside, Cimiside E possesses apoptotic action on gastric cancer cells, with an IC_{50} value of 14.58 μM. Cimiside E induces cell cycle arrest at G2/M phase, and mediates apoptosis through the induction of the caspase cascade for both the extrinsic and intrinsic pathways[1][2].

IC_{50} & Target

Caspase 3

In Vitro

Cimiside E (30-90 μM; 24 h) arrest cell cycle and induces apoptosis in ASG cells[1].
Cimiside E (30-90 μM; 12-48 h) has a strong cytotoxicity on AGS cells and shows anti-proliferative activity[1].
Cimiside E (15-60 μM; 6-24 h) induces DNA fragment, (30-60; 1-6 h) activates expression of FasL at 3 h and Fas from 1 h in ASG cells[1].
Cimiside E (30-90 μM; 3-24 h) mediates caspase cascade, by increasing Bax/Bcl-2 ratio and decreasing mutant type (mt) p53 and procaspase 3[1].

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

Western Blot Analysis[1]

Cell Line:	Cimiside E. AGS cells
Concentration:	30 μM, 60 μM, and 90 μM
Incubation Time:	3 h, 6 h, 12 h, and 24 h
Result:	Increased the ratio of Bax/Bcl-2 expression from 60 μM. Decreased mutant type (mt) p53 levle from 12 h at 30 μM. Suppressed the protein level of procaspase 3 in a dose-dependent manner from 30 μM.

Cell Proliferation Assay[1]

Cell Line:	Cimiside E. AGS cells
Concentration:	30 μM, 60 μM, and 90 μM
Incubation Time:	12 h, 24 h, and 48 h
Result:	Inhibited ASG cells proliferation with IC_{50}s of 28.7, 14.6 and 8.1 μM, respectively, for 30 μM, 60 μM, and 90 μM treatment.

Cell Cycle Analysis[1]

Cell Line:	Cimiside E. AGS cells
Concentration:	30 μM, 60 μM, and 90 μM
Incubation Time:	3 h, 6 h, and 24 h
Result:	Induced cell cycle arrest at S phase in a low concentration (30 μM), but arrested cell cycle at G2/M phase in higher concentration (60 μM and 90 μM).

REFERENCES

[1]. Guo LY, et al. Cimiside E arrests cell cycle and induces cell apoptosis in gastric cancer cells. Arch Pharm Res. 2009 Oct;32(10):1385-92.

[2]. Jamróz MK, et al. One new and six known triterpene xylosides from Cimicifuga racemosa: FT-IR, Raman and NMR studies and DFT calculations. Spectrochim Acta A Mol Biomol Spectrosc. 2012 Jul;93:10-8.

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