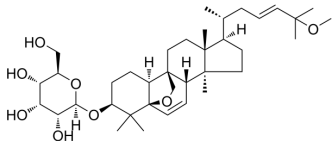
Momordicoside G

Cat. No.:	HY-N3248
CAS No.:	81371-54-2
Molecular Formula:	$C_{37}H_{60}O_8$
Molecular Weight:	632.87
Target:	Endogenous Metabolite; Reactive Oxygen Species; Apoptosis
Pathway:	Metabolic Enzyme/Protease; Immunology/Inflammation; NF-κB; Apoptosis
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

Momordicoside G (Momordicacoside G) is an orally active cucurbitane-type triterpene glycoside. Momordicoside G selectively induces apoptosis of M1-like macrophages, without affecting M2-like macrophages. Momordicoside G reduces intracellular ROS levels and promotes autophagy. Momordicoside G also has anticancer activity, inhibiting the growth of cancer cell lines. Momordicoside G stimulates M2-associated lung injury repair and prevents inflammatory lung cancer injury [1].

In Vitro

Raw264.7 macrophages is stimulated by 10 ng/mL LPS or 10 ng/mL IL-10 for 24 h to obtain M1-like (iNOS+) and M2-like (arginase+) macrophages[1].
Momordicoside G (10-40 μM; 24 h) inhibits the cell viability of M1 macrophages, but not M2 macrophage[1].
Momordicoside G (40 μM) induces M1 macrophage apoptosis in vitro, as well as decreasing the level of NO, and increasing the level of IL-12, IL-10, and TGF-β[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Viability Assay[1]

Cell Line:	M1 macrophages, M2 macrophages
Concentration:	10 μM, 20 μM, 40 μM
Incubation Time:	24 hours
Result:	Selectively decreased the cell viability of M1 macrophages, instead of M2 macrophages.

In Vivo

Lung carcinogenic model in ICR mice is induced by Urethane (HY-B1207) (600 mg/kg; i.p.; once weekly for 4 or 8 weeks), or in in macrophage-competent and macrophage-deleted mice is induced by LPS (HY-D1056) (2 mg/kg; intratracheal method) with 4 mg/mouse IEC (i.p.)[1].
Momordicoside G (50 mg/kg; p.o.; once daily for 4 or 8 weeks) prevents urethane-induced lung injury and carcinoma lesions in mouse lung carcinogenic model[1].
Momordicoside G (50 mg/kg; p.o.; once daily for 2 weeks) promotes lung injury repair in LPS-induced lung injury model[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Mouse lung carcinogenic model: Urethane-induced lung carcinogenic model and LPS-induced lung injury model[1]

Dosage:	50 mg/kg
Administration:	Oral gavage; once daily for 4 or 8 weeks
Result:	Affected inflammasome and cytokines during urethane-induced lung injury and carcinoma lesions. Exhibits macrophage-regulating capacity in LPS-induced lung injury model.

REFERENCES

[1]. Du Z, et al. Momordicoside G Regulates Macrophage Phenotypes to Stimulate Efficient Repair of Lung Injury and Prevent Urethane-Induced Lung Carcinoma Lesions. Front Pharmacol. 2019 Mar 29;10:321.

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