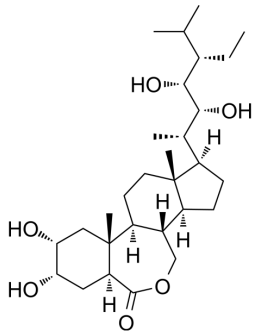
28-Homobrassinolide

Cat. No.:	HY-N9435		
CAS No.:	82373-95-3		
Molecular Formula:	$C_{29}H_{50}O_6$		
Molecular Weight:	494.7		
Target:	Others		
Pathway:	Others		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 20 mg/mL (40.43 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	2.0214 mL	10.1071 mL	20.2143 mL
	5 mM	0.4043 mL	2.0214 mL	4.0429 mL
	10 mM	0.2021 mL	1.0107 mL	2.0214 mL

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description

28-Homobrassinolide is a phytosteroid. 28-Homobrassinolide can be used for the research of cholesterol and glucose homeostasis[1].

In Vitro

28-Homobrassinolide (5-20 μM) indicates a 2-fold increase in glucose utilization and ABCA1 and SREBP2 protein expression in HepG2 cells[1].

28-Homobrassinolide decreases tissue glucose and cholesterol levels, increases cholesterol level and tissue hexokinase activity[1].

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

Cell Cytotoxicity Assay[1]

Cell Line:	HepG2 cells
Concentration:	1 μM, 5 μM, 10 μM, 20 μM, 30 μM, 40 μM, and 80 μM
Incubation Time:	24 h

Result:	The IC_{50} value of 40.57μM obtained by the MTT assay.

Western Blot Analysis[1]

Cell Line:	HepG2 cells
Concentration:	5, 10, and 20 μM
Incubation Time:	12 h
Result:	Exhibited an increase in both ABCA1 and SREBP2 markers.

In Vivo

28-HB (1-20 μg/day; for 6 weeks) exhibites a marked decrease in aortic fat deposit and serum marker levels in high-fat diet-fed C57BL/6 mice[1].

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

Animal Model:	High-fat diet-fed C57BL/6 mice[1]
Dosage:	1-20 μg/day
Administration:	For 6 weeks
Result:	Observed a significant decrease in lipid deposition.

REFERENCES

[1]. Victor Mukherjee, et al. Phytosteroid 28-homobrassinolide targets cholesterol and glucose homeostasis implicating ABCA1 and SREBP role in regulation. Steroids. 2021 Jan;165:108756.

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