Lumisterol 3 (>90%)

Cat. No.: HY-112023

CAS No.: 5226-01-7

Molecular Formula: $C_{27}H_{44}O$

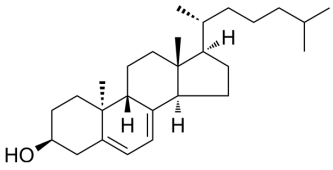
Molecular Weight: 385

Target: Endogenous Metabolite

Pathway: Metabolic Enzyme/Protease

Storage: -80°C, protect from light, stored under nitrogen

* The compound is unstable in solutions, freshly prepared is recommended.



SOLVENT & SOLUBILITY

In Vitro

DMSO : 2 mg/mL (5.19 mM; ultrasonic and warming and heat to 60°C)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	2.5974 mL	12.9870 mL	25.9740 mL
	5 mM	0.5195 mL	2.5974 mL	5.1948 mL
	10 mM	---	---	---

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

BIOLOGICAL ACTIVITY

Description

Lumisterol 3 (>90%) (9β,10α-Cholesta-5,7-dien-3β-ol) is a normal human secosterooid metabolite from the class of vitamin D3 photoisomer derivatives. Lumisterol 3 (>90%) is used in the preparation of vitamin D[1].

IC_{50} & Target

Human Endogenous Metabolite

In Vitro

Lumisterol 3 (L3) (1-100 nM, 24 h) significantly reduces UVB-induced cellular oxidant formation in a dose-dependent manner and inhibits the proliferation of UVB-irradiated keratinocytes[2].

Lumisterol 3 (L3) (100 nM, 24 h) promotes repair of cellular DNA damage induced by UVB irradiation and increases the nuclear/cytosolic Nrf2 ratio and nuclear p53 expression level in UVB-irradiated cells[2].

Lumisterol 3 (L3) (100 nM, 3 h) significantly enhances the expression levels of Nrf2-regulated antioxidant proteins, including catalase and HO-1 in UVB-irradiated cells[2].

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

REFERENCES

[1]. Anyamanee Chaiprasongsuk, et al. Protective effects of novel derivatives of vitamin D3 and lumisterol against UVB-induced damage in human keratinocytes involve activation of Nrf2 and p53 defense mechanisms. Redox Biol. 2019 Jun;24:101206.

[2]. Slominski AT, Li W, Kim TK, et al. Novel activities of CYP11A1 and their potential physiological significance. J Steroid Biochem Mol Biol. 2015;151:25-37.

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