

Monascuspiloin

Chemical Properties

CAS No. : 1011244-19-1

Formula: C₂₁H₂₈O₅

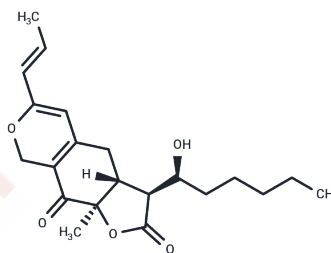
Molecular Weight: 360.44

Keep away from direct sunlight, Store at low temperature

Storage:

Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Actual storage temperature shall be subject to the COA.



Biological Description

Description	Monascuspiloin (Monascinol), a compound extracted from rice fermented with <i>Rhodobacter sphaeroides</i> , exhibits antiandrogenic and antitumor activity and inhibits the proliferation of PC-3 and LNCaP. Monascuspiloin improves lipid metabolism and hepatic function in over-alcohol-addicted mice by decreasing hepatic MDA levels and increasing hepatic CAT, SOD and GSH levels. Monascuspiloin has been shown to improve lipid metabolism and hepatic function in over-alcoholized mice. Monascuspiloin regulates the transcription and protein expression of genes related to hepatic lipid metabolism and oxidative stress, and can be used to study alcohol-induced liver injury.
Targets(IC50)	Apoptosis, Androgen Receptor, Akt, AMPK, Autophagy, mTOR
In vitro	Monascuspiloin is an anti-androgenic compound with an IC ₅₀ value of 7 μM, which inhibits the viability of PC-3 and LNCaP cells, with IC ₅₀ values of 45 μM and 47 μM, respectively. Monascuspiloin induces apoptosis of LNCaP cells through inhibition of Akt/mTOR signaling and autophagy through activation of the AMPK signaling pathway. apoptosis by inhibiting the Akt/mTOR signaling pathway and induced autophagy by activating the AMPK signaling pathway. In addition, Monascuspiloin was able to arrest the PC-3 cell cycle in G ₂ /M phase. [1][2]
In vivo	In a mouse model, Monascuspiloin showed significant anti-tumor effects. [2]

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.7744 mL	13.8719 mL	27.7439 mL
5 mM	0.5549 mL	2.7744 mL	5.5488 mL
10 mM	0.2774 mL	1.3872 mL	2.7744 mL
50 mM	0.0555 mL	0.2774 mL	0.5549 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Chen RJ, et al. Monascuspiloin induces apoptosis and autophagic cell death in human prostate cancer cells via the Akt and AMPK signaling pathways. *J Agric Food Chem.* 2012 Jul 25;60(29):7185-93.

Chiu HW, et al. Monascuspiloin enhances the radiation sensitivity of human prostate cancer cells by stimulating endoplasmic reticulum stress and inducing autophagy. *PLoS One.* 2012;7(7):e40462.

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