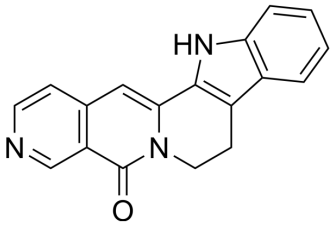
Nauclefine

Cat. No.:	HY-N10149
CAS No.:	57103-51-2
Molecular Formula:	$C_{18}H_{13}N_3O$
Molecular Weight:	287.32
Target:	Phosphodiesterase (PDE); Apoptosis
Pathway:	Metabolic Enzyme/Protease; Apoptosis
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Nauclefine is an indole alkaloid isolated from Nauclea officinalis. Nauclefine acts as a PDE3A modulator to induce cancer cell apoptosis through a PDE3A-SLFN12-dependent death pathway[1].
In Vitro	Nauclefine (250?nM, 48 h) can inhibit the viability of HeLa cells and induce apoptosis, resulting in cell death dependent on PDE3A and SLFN12. Nauclefine can bind PDE3A, but does not inhibit its phosphodiesterase activity, can promote the interaction between PDE3A and SLFN12, and promote cell death by increasing the stability of SLFN12[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Nauclefine (5 mg/kg, intratumorally, once per day for 22 days) significantly reduces the overall growth of HeLa-luc cell tumors in female nude mice (Balb/c-nu) infected with HeLa cells, especially after treatment 6 Days later, the tumor volume is significantly reduced without causing any decrease in the body weight of the mice. Its inhibition of tumor growth depends on the expression of PDE3A and SLFN12[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Youwei Ai, et al. An alkaloid initiates phosphodiesterase 3A-schlafen 12 dependent apoptosis without affecting the phosphodiesterase activity. Nat Commun. 2020 Jun 26;11(1):3236.

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