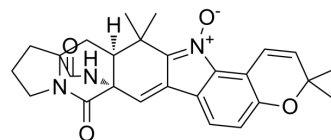


Avrainvillamide

Cat. No.:	HY-N10264
CAS No.:	269741-97-1
Molecular Formula:	C ₂₆ H ₂₇ N ₃ O ₄
Molecular Weight:	445.51
Target:	Antibiotic
Pathway:	Anti-infection
Storage:	-20°C, sealed storage, away from moisture * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 2.23 mg/mL (5.01 mM; Need ultrasonic and warming)

Concentration	Mass		
	1 mg	5 mg	10 mg
1 mM	2.2446 mL	11.2231 mL	22.4462 mL
5 mM	0.4489 mL	2.2446 mL	4.4892 mL
10 mM	---	---	---

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

BIOLOGICAL ACTIVITY

Description

Avrainvillamide ((+)-Avrainvillamide) is a naturally occurring alkaloid with antiproliferative effects, binds to the nuclear chaperone nucleophosmin, a proposed oncogenic protein that is overexpressed in many different human tumors. Avrainvillamide affects cell biology both by directly binding NPM1 and Crm1 as well as by inhibiting the association of these proteins with certain native cellular partners. Avrainvillamide, an antibiotic, inhibits growth of multi-agent resistant *Staphylococcus aureus*, *Streptococcus pyogenes*, and *Enterococcus faecalis*, with MICs of 12.5, 12.5 and 25 µg/ml, respectively^{[1][2][3]}.

In Vitro

Avrainvillamide ((+)-Avrainvillamide) restores nucleolar localization of certain acute myeloid leukemia (AML)-associated mutant forms of NPM1 and provide evidence that this relocalization is mediated by interactions of Avrainvillamide with mutant NPM1 and exportin-1 (Crm1)^[2]. Avrainvillamide ((+)-Avrainvillamide) shows antiproliferative activities in T-47D (breast cancer) cells and LNCaP (prostate cancer) cells with GI₅₀s of 0.33 and 0.42 µM, respectively^[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Wulff JE, et al. The natural product avrainvillamide binds to the oncoprotein nucleophosmin. *J Am Chem Soc.* 2007;129(46):14444-14451.

[2]. Mukherjee H, et al. Interactions of the natural product (+)-avrainvillamide with nucleophosmin and exportin-1 Mediate the cellular localization of nucleophosmin and its AML-associated mutants. *ACS Chem Biol.* 2015;10(3):855-863.

[3]. Sugie Y, et al. A new antibiotic CJ-17,665 from *Aspergillus ochraceus*. *J Antibiot (Tokyo).* 2001;54(11):911-916.

Caution: Product has not been fully validated for medical applications. For research use only.

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