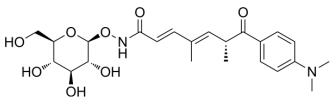
Trichostatin C

Cat. No.:	HY-126566
CAS No.:	68676-88-0
Molecular Formula:	$C_{23}H_{32}N_2O_8$
Molecular Weight:	464.51
Target:	Fungal; HDAC; Apoptosis
Pathway:	Anti-infection; Cell Cycle/DNA Damage; Epigenetics; Apoptosis
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

Trichostatin C is an inhibitor for histone deacetylase (HDAC), induces apoptosis and arrests cell cycle at G2/M phase, and exhibits anticancer activity against lung cancer and urothelial bladder cancer[1]. Trichostatin C induces differentation of Friend leukemic cells[2]. Trichostatin C exhibits antifungal activity[3].

IC_{50} & Target	HDAC1	HDAC6

In Vitro

Trichostatin C (0-100 μM) exhibits inhibitory activity against HDAC1 and HDAC6, inhibits proliferations of cancer cells A549, J82 and SK-BR-3, with IC_{50}s of 6.24, 4.16 and 0.6 μM, respectively[1].

Trichostatin C (0-10 μM) induces apoptosis in cells J82 through activation of caspase 3 and caspase 7[1].

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

Cell Proliferation Assay[1]

Cell Line:	A549, J82 and SK-BR-3
Concentration:	0-100 μM
Incubation Time:	72 h
Result:	Inhibits proliferations of A549, J82 and SK-BR-3.

Western Blot Analysis[1]

Cell Line:	J82
Concentration:	20-80 μM
Incubation Time:	24 h
Result:	Induced acetylation of α-Tubulin and Histone 3 (markers of HDAC1 and HDAC6 inhibition).

Apoptosis Analysis[1]

Cell Line:	J-82
Concentration:	0.1-10 μM

Incubation Time:	48 h
Result:	Activated 23.1, 61.7 and 62.3% caspase 3/7 at 0.1 μM, 1 μM and 10 μM.

REFERENCES

[1]. Wang C, et al., Trichostatin C Synergistically Interacts with DNMT Inhibitor to Induce Antineoplastic Effect via Inhibition of Axl in Bladder and Lung Cancer Cells[J]. Pharmaceuticals, 2024, 17(4): 425.

[2]. Yoshida M, et al., Trichostatin C, a new inducer of differentiation of Friend leukemic cells[J]. Agricultural and biological chemistry, 1985, 49(2): 563-565.

[3]. Tsuji N, et al., a glucopyranosyl hydroxamate. J Antibiot (Tokyo). 1978 Oct;31(10):939-44.

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