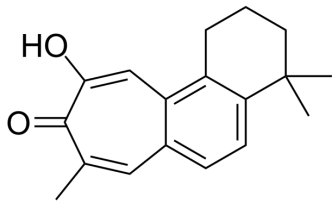
Salviolone

Cat. No.:	HY-122506
CAS No.:	119400-86-1
Molecular Formula:	$C_{18}H_{20}O_2$
Molecular Weight:	268.35
Target:	STAT
Pathway:	JAK/STAT Signaling; Stem Cell/Wnt
Storage:	-20°C, protect from light * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



BIOLOGICAL ACTIVITY

Description

Salviolone is a natural diterpenoid derivative that can against melanoma cells. Salviolone exhibits a pleiotropic effect against melanoma by hampering cell cycle progression, STAT3 signaling, and malignant phenotype of A375 melanoma cells [1].

In Vitro

Salviolone (5-60 μM; 72 hours) reduces cell viability in the A375 and MeWo melanoma cell lines with EC_{50} values of 17 μM and 22 μM, respectively. Salviolone does not affect the growth of normal melanocytes[1].

Salviolone (20 μM; 48-72 hours) strongly reduces pRb, pCdk2, and cyclin A2, Tyr705-STAT3 phosphorylation expression levels in A375 cells. Salviolone also strongly increases the P21 and P53 protein expression level. Salviolone induces sustained activation of the phosphorylation of ERK1/2 and Akt[1].

Salviolone (10-20 μM) inhibits MMP2 gelatinase activity in the A375 melanoma cell line[1].

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

Cell Viability Assay[1]

Cell Line:	A375, MeWo melanoma cells, and NHEM cells
Concentration:	5 μM, 10 μM, 20 μM, 30 μM, 40 μM, 50 μM, 60 μM
Incubation Time:	72 hours
Result:	Impaired the viability of melanoma cells without affecting the growth of normal melanocytes.

Western Blot Analysis[1]

Cell Line:	A375 cells
Concentration:	20 μM
Incubation Time:	48 hours, 72 hours
Result:	Reduced the expression of the active forms of Cdk2 (pCdk2) and cyclin A2, and the phosphorylation of Rb.

REFERENCES

[1]. Valentina Zanrè, et al. Salviolone from Salvia miltiorrhiza Roots Impairs Cell Cycle Progression, Colony Formation, and Metalloproteinase-2 Activity in A375 Melanoma Cells: Involvement of P21(Cip1/Waf1) Expression and STAT3 Phosphorylation. Int J Mol Sci. 2022 Jan 20;23(3):1121.

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