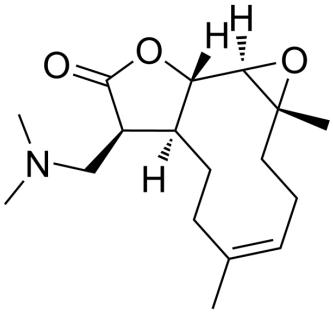
(S)-DMAPT

Cat. No.:	HY-16172A
CAS No.:	870677-05-7
Molecular Formula:	$C_{17}H_{27}NO_3$
Molecular Weight:	293.4
Target:	NF-κB
Pathway:	NF-κB
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	(S)-DMAPT (Dimethylamino Parthenolide), an analogue of Parthenolide (PTL), is an oral active NF-κB inhibitor, with a LD_{50} of 1.7 μM for cell population in AML cells. Has potential anti-cancer and anti-metastatic effect[1].
In Vitro	DMAPT treatment decreased constitutive NF-κB binding activity, inhibits cell proliferation and viability of PC-3 and DU145 cells[2]. Treatment of PC-3 and DU145 cells with 5 and 4 μM DMAPT, respectively, increases the population doubling times of PC-3 prostate cancer cells from 23.0 ± 5.0 h to 42.0 ± 3.0 h and of the DU145 cells from 20.4 ± 2.2 h to 72.5 ± 24.8 h[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Treatment with DMAPT (100 mg/kg, Oral gavage daily for 7 days) increases sensitivity of PC-3 tumor xenografts to X-rays[2]. DMAPT (100 mg/kg, Oral gavage thrice weekly from 42 to 300 days since birth) treatment slows normal tumor development in TRAMP mice, extending the time-to-palpable prostate tumor by 20%[3]. DMAPT further reduces the metastatic area below that of the water vehicle treatment group in lung tissues (0.10% ± 0.15 SD, 92% reduction, p = 0.0028) in TRAMP mice[3]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Neelakantan S, et al. Aminoparthenolides as novel anti-leukemic agents: Discovery of the NF-kappaB inhibitor, DMAPT (LC-1). Bioorg Med Chem Lett. 2009 Aug 1;19(15):4346-9.

[2]. Mendonca MS, et al. DMAPT inhibits NF-κB activity and increases sensitivity of prostate cancer cells to X-rays in vitro and in tumor xenografts in vivo. Free Radic Biol Med. 2017 Nov;112:318-326.

[3]. Morel KL, et al. Chronic low dose ethanol induces an aggressive metastatic phenotype in TRAMP mice, which is counteracted by parthenolide. Clin Exp Metastasis. 2018 Oct;35(7):649-661.

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

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