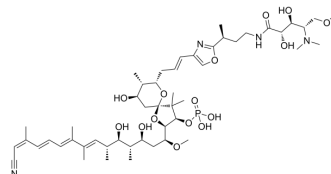


Calyculin A

Cat. No.:	HY-18983
CAS No.:	101932-71-2
Molecular Formula:	C ₅₀ H ₈₁ N ₄ O ₁₅ P
Molecular Weight:	1009.17
Target:	Phosphatase
Pathway:	Metabolic Enzyme/Protease
Storage:	Solution, -20°C, 2 years



BIOLOGICAL ACTIVITY

Description	Calyculin A ((-)-Calyculin A) is a potent and cell-permeable protein phosphatase 1 (PP1) and protein phosphatase 2A (PP2A) inhibitor with IC ₅₀ s of 2 nM and 0.5-1 nM, respectively ^[1] .								
IC₅₀ & Target	IC ₅₀ : 2 nM (PP1); 0.5-1 nM (PP2A) ^[1]								
In Vitro	<p>Calyculin A (1-10 nM; 24 hours) induces cytotoxicity in MG63 cells in a dose-dependent manner^[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <p>Cell Cytotoxicity Assay^[2]</p> <table border="1"> <tr> <td>Cell Line:</td> <td>Human osteosarcoma MG63 cells</td> </tr> <tr> <td>Concentration:</td> <td>0, 1, 2, 5, 10 nM</td> </tr> <tr> <td>Incubation Time:</td> <td>24 hours</td> </tr> <tr> <td>Result:</td> <td>Treatment with 0.1 nM for 24 h had a minimal effect on MG63 cell survival. Cell rounding and shrinking were obvious in the cultures treated for 24 h with 5 nM. The level of the cell viability treated with 10 nM was 27% that of the control cultures.</td> </tr> </table>	Cell Line:	Human osteosarcoma MG63 cells	Concentration:	0, 1, 2, 5, 10 nM	Incubation Time:	24 hours	Result:	Treatment with 0.1 nM for 24 h had a minimal effect on MG63 cell survival. Cell rounding and shrinking were obvious in the cultures treated for 24 h with 5 nM. The level of the cell viability treated with 10 nM was 27% that of the control cultures.
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CUSTOMER VALIDATION

- Cell Discov. 2020 Apr 28;6:26.
- Autophagy. 2022 Oct 27.
- Cell Death Differ. 2021 Nov 19.
- Redox Biol. 2023 Aug, 64, 102780.
- Cell Rep. 2021 Jul 20;36(3):109404.

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REFERENCES

- [1]. Ishihara H, et al. Calyculin A and okadaic acid: inhibitors of protein phosphatase activity. *Biochem Biophys Res Commun*. 1989 Mar 31;159(3):871-7.
- [2]. Hiroaki Tanaka, et al. Calyculin A induces apoptosis and stimulates phosphorylation of p65NF-kappaB in human osteoblastic osteosarcoma MG63 cells. *Int J Oncol*. 2007 Aug;31(2):389-96.
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Caution: Product has not been fully validated for medical applications. For research use only.

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