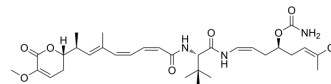


## PM050489

<b>Cat. No.:</b>	HY-N10558
<b>CAS No.:</b>	960210-97-3
<b>Molecular Formula:</b>	C <sub>31</sub> H <sub>44</sub> ClN <sub>3</sub> O <sub>7</sub>
<b>Molecular Weight:</b>	606.15
<b>Target:</b>	Microtubule/Tubulin
<b>Pathway:</b>	Cell Cycle/DNA Damage; Cytoskeleton
<b>Storage:</b>	Please store the product under the recommended conditions in the Certificate of Analysis.



### BIOLOGICAL ACTIVITY

<b>Description</b>	PM050489 is an effective polyketone inhibitor of Microtubule/Tubulin that can be isolated from Madagascan sponge <i>Lithoplocamia lithistoides</i> . PM050489 inhibits mitosis with an IC <sub>50</sub> value of 26.4 nM. PM050489 has antitumor activity and can be used in cancer research <sup>[1][2]</sup> .								
<b>IC<sub>50</sub> &amp; Target</b>	Mitosis <sup>[1]</sup>								
<b>In Vitro</b>	<p>PM050489 inhibits the activity of HT-29, A-549 and MDA-MB-231 cells with GI<sub>50</sub> values of 0.46 nM, 0.38 nM and 0.45 nM, respectively<sup>[1]</sup>.</p> <p>PM050489 (0.01 nM and 0.1 nM; 24 h) destroys the morphology of microtubule networks and mitotic spindles in A549 cells<sup>[2]</sup>.</p> <p>PM050489 (0.01, 0.1, 1 and 10 nM) inhibits tubulin polymerization with dose-dependent manner in A549 cells<sup>[2]</sup>.</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <p>Cell Cycle Analysis<sup>[2]</sup></p> <table border="1"> <tr> <td>Cell Line:</td> <td>A549 cells.</td> </tr> <tr> <td>Concentration:</td> <td>0.25 nM.</td> </tr> <tr> <td>Incubation Time:</td> <td>20 h.</td> </tr> <tr> <td>Result:</td> <td>Induced A549 cell cycle arrest in G<sub>2</sub>/M phase.</td> </tr> </table>	Cell Line:	A549 cells.	Concentration:	0.25 nM.	Incubation Time:	20 h.	Result:	Induced A549 cell cycle arrest in G <sub>2</sub> /M phase.
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### REFERENCES

- [1]. Martín MJ, et al. Isolation and first total synthesis of PM050489 and PM060184, two new marine anticancer compounds. *J Am Chem Soc.* 2013 Jul 10;135(27):10164-71.
- [2]. Pera B, et al. New interfacial microtubule inhibitors of marine origin, PM050489/PM060184, with potent antitumor activity and a distinct mechanism. *ACS Chem Biol.* 2013 Sep 20;8(9):2084-94.

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

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