

## PNC-27

<b>Cat. No.:</b>	HY-P3508
<b>CAS No.:</b>	1159861-00-3
<b>Molecular Formula:</b>	C <sub>188</sub> H <sub>293</sub> N <sub>53</sub> O <sub>44</sub> S
<b>Molecular Weight:</b>	4031.73
<b>Sequence Shortening:</b>	PPLSQETFSDLWKLLKKWKMRNRNQFWVKVQRG
<b>Target:</b>	Others
<b>Pathway:</b>	Others
<b>Storage:</b>	Please store the product under the recommended conditions in the Certificate of Analysis.

### BIOLOGICAL ACTIVITY

<b>Description</b>	PNC-27 is an anticancer peptide, containing an HDM-2-binding domain. PNC-27 shows anti-tumor activity and can be used in acute myeloid leukemia research <sup>[1][2][3]</sup> .	
<b>In Vitro</b>	PNC-27 (50 µg/mL; 0-3 h) induces cancer cell death <sup>[1]</sup> .	
	PNC-27 (50 µg/mL; 15 min) binds to cell membrane-bound HDM-2 <sup>[1]</sup> .	
	MCE has not independently confirmed the accuracy of these methods. They are for reference only.	
	Cell Cytotoxicity Assay <sup>[1]</sup>	
	Cell Line:	MIA-PaCa-2 cells
	Concentration:	50 µg/mL
	Incubation Time:	0-3 hours
	Result:	Induced 100% cell death in 90 min.
	Immunofluorescence <sup>[1]</sup>	
	Cell Line:	A2058 and MCF-7 cells
Concentration:	50 µg/mL	
Incubation Time:	15 min	
Result:	Showed colocalization of PNC-27 with HDM-2 in the cancer cell membrane.	
<b>In Vivo</b>	PNC-27 (intraperitoneal injection; 40 mg/kg; once daily; 2-3 w) shows anti-leukemia activity in vivo <sup>[2]</sup> .	
	MCE has not independently confirmed the accuracy of these methods. They are for reference only.	
	Animal Model:	MI <sup>[PTD/WT]/Flt3<sup>ITD/ITD</sup></sup> AML mice <sup>[2]</sup>
Dosage:	40 mg/kg	

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Administration:	Intraperitoneal injection; 40 mg/kg; once daily; 2 or 3 weeks
Result:	Observed reduced AML engraftment and prolonged survival.

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## REFERENCES

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- [1]. Sarafraz-Yazdi E, et al. Anticancer peptide PNC-27 adopts an HDM-2-binding conformation and kills cancer cells by binding to HDM-2 in their membranes. Proc Natl Acad Sci U S A. 2010 Feb 2;107(5):1918-23.
- [2]. Wang H, et al. Targeting cell membrane HDM2: A novel therapeutic approach for acute myeloid leukemia. Leukemia. 2020 Jan;34(1):75-86.
- [3]. Sookraj KA, et al. The anti-cancer peptide, PNC-27, induces tumor cell lysis as the intact peptide. Cancer Chemother Pharmacol. 2010 Jul;66(2):325-31.
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**Caution: Product has not been fully validated for medical applications. For research use only.**

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