

## MDP1

Cat. No.:	HY-P3328
Molecular Formula:	C <sub>111</sub> H <sub>202</sub> N <sub>34</sub> O <sub>28</sub>
Molecular Weight:	2461
Sequence Shortening:	GIGAVLKVLTTGLPALIKRKRQQ
Target:	Bacterial
Pathway:	Anti-infection
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.

### BIOLOGICAL ACTIVITY

<b>Description</b>	MDP1, a Melittin-derived peptide, alters the integrity of both Gram-positive and Gram-negative bacterial membranes and kills the bacteria via membrane damages. MDP1 has a high-antibacterial activity against multidrug resistant (MDR) and reference strains of <i>S. aureus</i> , <i>E. coli</i> , and <i>P. aeruginosa</i> <sup>[1]</sup> .
<b>In Vitro</b>	MDP1 exhibits more potent antibacterial activities against <i>S. aureus</i> , <i>E. coli</i> and <i>P. aeruginosa</i> . Geometric means of MICs for MDP1 is recorded at 4.06 µg/mL ( <i>S. aureus</i> ), 1.22 µg/mL ( <i>E. coli</i> ) and 3.75 µg/mL ( <i>P. aeruginosa</i> ), respectively <sup>[1]</sup> . DNA and calcein release and flow cytometry assays indicate a time-dependent antibacterial activity on the examined bacteria affected by MDP1 (10, 5, 2.5, 1.25, 0.625 and 0.312 µg/mL). Finally, SEM analyses highlights dose- and time-dependent effects of MDP1 on <i>S. aureus</i> and <i>E. coli</i> bacteria by induction of vesicle or pore formation as well as cell lysis <sup>[1]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

### REFERENCES

[1]. Akbari R, et al. Action mechanism of melittin-derived antimicrobial peptides, MDP1 and MDP2, de novo designed against multidrug resistant bacteria. *Amino Acids*. 2018;50(9):1231-1243.

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

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA