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Figure S1. ESI-MS spectra of peptides. The molecular masses of BMAP-18 and BMAP-18-FL were analyzed using Electrospray Ionization-Mass Spectrometry (ESI-MS).

**Figure S2.**

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Figure S2. SYTOX green uptake caused by peptides. The SYTOX Green uptake assay was conducted on *S. aureus* with peptides administered at 1 MIC. SYTOX Green, a fluorescent nucleic acid stain, enters the bacterial cells through compromised membranes, leading to a detctable fluorescence signal. Mellitin and buforin-2 were used as positive and negative controls, respectively. In comparison to melittin, both BMAP-18 and BMAP-18-FL showed no significant induction of SYTOX Green entry.