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Communication

Synthesis of cyclic peptide reniochalistatin E and conformational isomers

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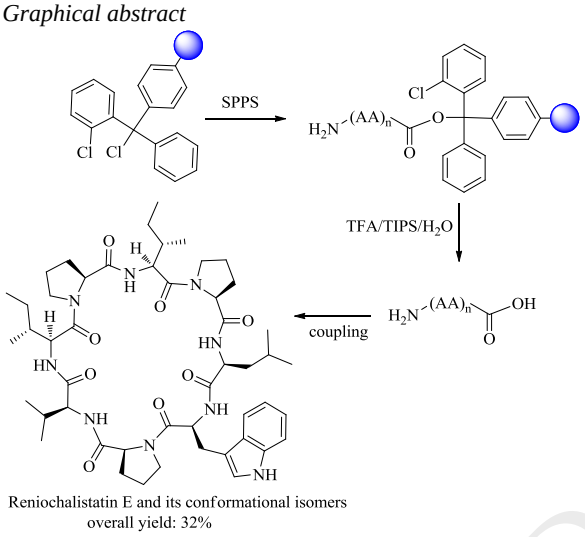
Graphical abstract



Here we describe a convergent synthesis of reniochalistatin E that utilized solid-phase peptide synthesis. For macrolactamization of the linear peptides without the side chain protecting group, we obtained reniochalistatin E and its conformational isomers with 32% isolation yield.

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ABSTRACT

Here, we report a convenient and efficient synthesis strategy for the total synthesis of cyclic peptide reniochalistatin E and its conformational isomers with 32% overall yield. We found the linear peptide precursor without side chain gave better cyclization yield.

Keywords:
Cyclic peptide
Reniochalistatin E
Solid-phase peptide synthesis
Conformational isomers

Cyclic peptides from natural source are particularly important, they show an increasingly significant role in medicine and biology [1,2], for example, vancomycin [3-5], cyclosporine [6], daptomycin [7] and teixobactin [8,9]. Nowadays, hundreds of cyclic peptides

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