

Showcasing research from Professor David M. Perrin's laboratory, Department of Chemistry, University of British Columbia, Vancouver, Canada.

Chemoselective, regioselective, and positionally selective fluorogenic stapling of unprotected peptides for cellular uptake and direct cell imaging

The modulation of peptidic scaffolds through stapling represents a powerful tool for improving peptide druggability in targeting protein-protein interactions (PPIs). However, stapling methods often rely on the use of non-natural amino acids. We report a rapid, mild, and positionally selective stapling reaction in unprotected peptides using 2-arylketobenzaldehydes linchpins, which in select cases, results in a highly fluorescent thiol-isoindole crosslink between Lys-Cys pairs in one step. In other cases, chromogenic reagents result in colored peptides. This can be directly used as a probe for cell imaging to assess stapled-peptide cell permeability.





