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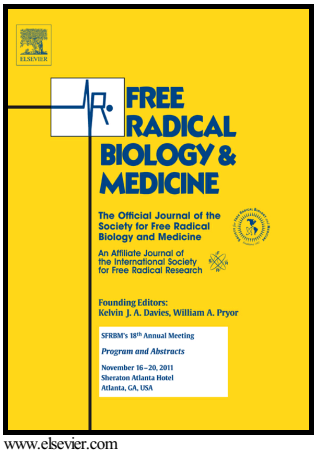

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Synthesis of L-cysteine derivatives containing stable sulfur isotopes and application of this synthesis to reactive sulfur metabolome

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Abstract

Cysteine persulfide is an L-cysteine derivative having one additional sulfur atom bound to a cysteinyl thiol group, and it serves as a reactive sulfur species that regulates redox homeostasis in cells. Here, we describe a rapid and efficient method of synthesis of L-cysteine derivatives containing isotopic sulfur atoms and application of this method to a reactive sulfur metabolome. We used bacterial cysteine syntheses to incorporate isotopic sulfur atoms into the sulfhydryl

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