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# Stable Isotope Labeling with Amino Acids in Cell Culture

National Cancer Institute

## Source

National Cancer Institute. *Stable Isotope Labeling with Amino Acids in Cell Culture*. NCI Thesaurus. Code C161804.

A method for generating labeled proteins or peptides for mass spectrometry analysis that leverages the cellular protein translation machinery. Briefly, cells are grown through several rounds of cell division in a culture medium that lacks a standard essential amino acid and instead contains a non-radioactive isotope-labeled version of that amino acid. After a set number of cell doublings, each occurrence of the essential amino acid will be replaced with the labeled analog.