TECHNOLOGY

A Rapid Method for Scanning Amino Acid Mutagenesis

OVERVIEW

In order to study the relationship between structure and function of a protein, the DNA encoding the protein or its corresponding amino acid is subjected to mutations. A number of methods to mutagenize DNA have been developed including site-directed mutagenesis, linker scanning mutagenesis, and the alanine scanning mutagenesis. The first method involves changing a nucleotide or two at a time. The latter two methods use a transposon directed mutagenesis protocol that can simultaneously generate a number of mutants. These current methods for mutagenesis in proteins are both time consuming and an expensive process

Researchers at the University of Maryland have developed a novel, rapid method for scanning amino acid mutagenesis. This method is a transposon mediated system and can be performed in a high throughput manner. The current development represents an at least 10 fold improvement in time and financial investment. Also, unlike currently available technology, this system does not insert or remove amino acids, but directly replaces them. The technology dramatically simplifies the process of making libraries of single amino acid mutant proteins.

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Additional Information

INSTITUTION

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PATENT STATUS

Patent(s) pending

LICENSE STATUS

Contact OTC for licensing information

CATEGORIES

- Research Tools, Antibodies, & Reagents

EXTERNAL RESOURCES

- US Patent 8,883,453

LS-2007-026