TECHNOLOGY

High Affinity PCR Primer System

OVERVIEW

Background

Polymerase chain reaction (PCR) is a biological research technique for the amplification of DNA sequences that has allowed for great advances in genetics. While PCR techniques have been refined over the years, and there has been continued development of the polymerases used in PCR, there are still some limitations to the technique. Limitations to PCR mainly relate to obtaining adequate yield for rare sequences and maintaining specificity in sequences with common features. Newly developed polymerase systems are generally able to overcome one limitation, but often at the expense of the other, for example increasing specificity while decreasing yield. As genetic research progresses into areas that are more complicated, the ability to have high yield and specificity in PCR will become an increasing need.

Innovative Technology

Researchers at the University of Maryland have developed a PCR primer system that shows up to a 20-fold increase in binding to Taq polymerase. This increase in binding affinity allows for greater amplification of rare sequences, but without observed increase in non-target amplification.

APPLICATIONS

· Genetic research requiring PCR primers

ADVANTAGES

· Increased specificity
· Increased sensitivity
· Primer system cheaper and easier to produce compared to antibody-based systems

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Additional Information

INSTITUTION

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LICENSE STATUS

Available for non-exclusive license

CATEGORIES

- Research Tools, Antibodies, & Reagents

EXTERNAL RESOURCES

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