TECHNOLOGY

# Restriction Enzyme Hae IV

## OVERVIEW

Restriction and modification (R/M) systems are found in a wide variety of prokaryotes and serve as a means to protect the host bacterium from foreign DNA. R/M systems are categorized based on the subunit structure of the enzyme, cofactor requirements, substrate specificity, and other properties. There are many enzymes that can be classified as variants for type II R/M systems. This is determined by the fact that they cleave at or very near to the recognition sequence. These specific enzymes may possess unusual protein structures or biochemical properties needed for activity.

Researchers at the University of Maryland have isolated a clone from H. aegyptius ATCC 1116 expressing a novel Restriction and modification system. R. HaeIV cleaves double-stranded DNA on both sides of its recognition sequence to excise a short fragment containing the recognition sequence. The novelty of this enzyme is that it recognizes a DNA sequence unique to this class of enzymes. HaeIV belongs to a rare class of enzymes that can be used to generate specific deletions in target DNA. This is useful because current technology requires that the desired enzyme be purified from bacterial strains that produce multiple restriction enzymes. By reducing the multiple purification steps of the restriction enzyme, the cost of the product is thereby reduced.

For more information please contact the Office of Technology Commercialization at the University of Maryland. 301-405-3947; e-mail: otc@umd.edu.

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# Additional Information

## INSTITUTION

University of Maryland, College Park

## PATENT STATUS

Not Filed

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## CATEGORIES

- Research Tools, Antibodies, & Reagents

## EXTERNAL RESOURCES

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