Methods in Enzymology

Volume 68

Recombinant DNA

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Preface

DNA is the genetic material of virtually all living organisms. The physical mapping of genes, the sequence analysis of DNA, and the identification of regulatory elements for DNA replication and transcription depend on the availability of pure specific DNA segments. The DNA of higher organisms is so complex that it is often impossible to isolate DNA molecules corresponding to a single gene in sufficient amounts for analysis at the molecular level. However, exciting new developments in recombinant DNA research make possible the isolation and amplification of specific DNA segments from almost any organism. These new developments have revolutionized our approaches in solving complex biological problems.

Recombinant DNA technology also opens up new possibilities in medicine and industry. It allows the manipulation of genes from different organisms or genes made synthetically for the large-scale production of medically and agriculturally useful products.

This volume includes a number of the specific methods employed in recombinant DNA research. Other related methods can be found in "Nucleic Acids," Volume 65, Part I, of this series.

I wish to thank the numerous authors who have contributed to this volume, as well as the very capable staff of Academic Press, for their assistance and cooperation. I also wish to extend my appreciation to Stanley Cohen and Lawrence Grossman for their advice in planning the contents of this volume.

RAY WU

METHODS IN ENZYMOLOGY

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II. Preparation and Assay of Enzymes
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Recombinant DNA

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