

Methods in Enzymology

Volume 73

Immunochemical Techniques

Part B

EDITED BY

John J. Langone

Helen Van Vunakis

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Preface

This volume continues the coverage of general immunochemical techniques presented in Volume 70, Part A. The papers illustrate the ingenuity characteristic of workers who have adapted the antigen-antibody reaction to develop a variety of assays which are applicable to numerous biochemical and clinical problems. Sensitivity and specificity clearly are among the major advantages of immunoassay techniques. These properties make these methods useful for quantification and purification of antigens representing a wide variety of chemical structures and biological activities. Markers of high specific activity labeled with radionuclides, enzymes, fluorescent molecules, or other probes have played an important role in the development of immunochemical methods sensitive to the femtomole range or less.

Much has been done with antibodies produced by classic immunization methods, and they will continue to be important reagents for the development and application of new and refined immunochemical techniques. However, hybridoma technology opens up new vistas for the future. Since a monoclonal antibody is a well-defined chemical reagent with absolute specificity and affinity for an individual determinant, the problems inherent in dealing with a heterogeneous population of antibodies are minimized. Monoclonal antibodies can be produced in large quantities and reproduced exactly in different laboratories, provided the original hybridoma is available. Perhaps in the near future, a central bank of hybridoma cell lines will provide an "off-the-shelf" source of specific antibodies available to scientists around the world. The investigator's only major effort would be to grow the cells and harvest the antibody product. The field is wide open for the development of innovative methods that will add even another dimension to analytical technology.

We are indebted to the authors whose contributions make these volumes possible. Carla Langone has continued to deal competently with the secretarial work and Dr. Adrian Gee has done an excellent job indexing the volumes. The continued enthusiastic support of Dr. Nathan Kaplan and Dr. Sidney Colowick is greatly appreciated.

JOHN J. LANGONE
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METHODS IN ENZYMOLOGY

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- II. Preparation and Assay of Enzymes
- III. Preparation and Assay of Substrates
- IV. Special Techniques for the Enzymologist
- V. Preparation and Assay of Enzymes
- VI. Preparation and Assay of Enzymes (*Continued*)
 - Preparation and Assay of Substrates
 - Special Techniques
- VII. Cumulative Subject Index

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