Table of Contents

Immunocytochemical Methods and Protocols, Third Edition Constance Oliver and Maria Célia Jamur, Eds.  
Table of Contents  
Preface  
Contributors  
Part I. Antibody Preparation  
Overview of Antibodies for Immunochemistry Constance Oliver and Maria Célia Jamur  
Introduction to the Purification of Antibodies Ana Cristina Grodzki and Elsa Berenstein  
Antibody Purification: Ammonium Sulfate Fractionation or Gel Filtration Ana Cristina Grodzki and Elsa Berenstein  
Antibody Purification: Ion-Exchange chromatography Ana Cristina Grodzki and Elsa Berenstein  
Antibody Purification: Affinity Chromatography - Protein A and Protein G Sepharose Ana Cristina Grodzki and Elsa Berenstein  
Conjugation of Fluorochromes to Antibodies Su-Yau Mao  
Biotinylation of Antibodies Su-Yau Mao  
Part II. Tissue Preparation for Light Microscopic Analysis  
Cell Fixatives for Immunostaining Maria Célia Jamur and Constance Oliver  
Permeablization of Cell Membranes Maria Célia Jamur and Constance Oliver  
Preparation of Frozen Sections for Analysis Gary L. Bratthauer  
Processing of Cytological Specimens Gary L. Bratthauer  
Processing of Tissue Culture Cells Gary L. Bratthauer  
Processing of Tissue Specimens Gary L. Bratthauer  
Heat Induced Antigen Retrieval for Immunohistochemical Reactions in Routinely Processed Paraffin Sections Laszlo Krenacs, Tibor Krenacs, Eva Stekovics, and Mark Raffield  
Part III: Bright Field Detection Systems  
Fluorochromes - Properties and Characteristics J. Michael Mullins  
Direct Immunofluorescent Labeling of Cells Maria Veronica Dávila Pástor  
Fluorescence Labeling of Surface Antigens of Attached or Suspended Tissue-Culture Cells Mark C. Willingham  
Fluorescence Labeling of Intracellular Antigens of Attached or Suspended Tissue-Culture Cells Mark C. Willingham  
Fluorescence Visualization of Macromolecules in Drosophila Whole Mounts Ricardo Guelerman Pinheiro Ramos, Luciana Claudia Herculano Machado, and Livia Maria Rosatto Moda  
Overview of Conventional Fluorescence Photomicrography J. Michael Mullins  
Overview of Confocal Microscopy William D. Swaim  
Overview of Laser Microbeam Applications as Related to Antibody Targeting P. Scott Pine  
Overview of Immunohistochemistry for Real Time Quantitative PCR L. Scot Bastian and Denis G. Baskin  
Overview of Antigen Detection through Enzymatic Activity Gary L. Bratthauer  
The Peroxidase-antiperoxidase (PAP) Method and Other All-Immunologic Detection Methods Gary L. Bratthauer  
The Avidin-Biotin Complex (ABC) Method and Other Avidin-Biotin Binding Methods Gary L. Bratthauer  
Labeling of Cellular Antigens in Cryostat-Sectioned Tissue Mark Raffield and Elaine S. Jaffe  
Multiple Antigen Immunostaining Procedures Tibor Krenacs, Laszlo Krenacs and Mark Raffield  
Immunoenzymatic Quantitative Analysis of Antigens Expressed on the Cell Surface (Cell-ELISA) Elaine Vicente Lourenço and Maria-Cristina Roque-Barreira  
Use of Immunogold with Silver Enhancement Constance Oliver  
Part IV: Fluorescence-Activated Cell Sorter (FACS) Analyses  
Overview of Flow Cytometry and Fluorescent Probes for Flow Cytometry Robert E. Cunningham  
Tissue Disaggregation Robert E. Cunningham  
Indirect Immunofluorescent Labeling of Viable Cells Robert E. Cunningham  
Indirect Immunofluorescent Labeling of Fixed Cells Robert E. Cunningham  
Fluorescent Labeling of DNA Robert E. Cunningham  
Deparaffinization and Processing of Pathologic Material Robert E. Cunningham  
Part V: Colloidal Gold Detection Systems  
Electron Microscopic Analysis Fixation and Embedding Constance Oliver and Maria Célia Jamur  
Preparation of Colloidal Gold Constance Oliver  
Conjugation of Colloidal Gold to Proteins Constance Oliver  
Colloidal Gold/Streptavidin Methods Constance Oliver  
Pre-Embedding Labeling Methods Constance Oliver  
Postembedding Labeling Methods Constance Oliver  
Part VI: The Clinical Laboratory  
The Clinical Immunohistochemistry Laboratory: Regulations and Troubleshooting Guidelines Patricia A. Fetsch and Andrea Abati