
Contents

Preface v

Contributors xi

PART I. MANIPULATION AND DETECTION OF SURVIVAL SIGNALS

1 Functional Analysis of the Antimitogenic Activity
of Tumor Suppressors
Erik S. Knudsen and Steven P. Angus 3

2 Rescue and Isolation of *Rb*-deficient Prostate Epithelium
by Tissue Recombination
Simon W. Hayward, Yuzhuo Wang, and Mark L. Day..... 17

3 Signal Transduction Study Using
Gene-Targeted Embryonic Stem Cells
**Hideki Kawasome, Takashi Hamazaki, Tetsuo Minamino,
and Naohiro Terada**..... 35

4 The Use of the Yeast Two-Hybrid System to Measure
Protein–Protein Interactions that Occur Following Oxidative Stress
Richard A. Franklin..... 47

5 Differential Screening of cDNA Libraries for Analysis
of Gene Expression During Tumor Progression
Christopher W. Gregory..... 59

6 Mitogen-Activated Protein Kinase Signaling
in Drug-Resistant Neuroblastoma Cells
Raymond R. Mattingly..... 71

7 TUNEL and Immunofluorescence Double-Labeling Assay
for Apoptotic Cells with Specific Antigen(s)
Stephanie M. Oberhaus..... 85

PART II. MANIPULATION AND DETECTION OF ONCOGENIC SIGNALS

8 Kinetworks™ Protein Kinase Multiblot Analysis
Steven Pelech, Catherine Sutter, and Hong Zhang 99

9 Protein Tyrosine Kinase and Phosphatase Expression Profiling
in Human Cancers
Wen-Chang Lin..... 113

10	Association of Nonreceptor Tyrosine Kinase c-Yes with Tight Junction Protein Occludin by Coimmunoprecipitation Assay Yan-Hua Chen and Qun Lu	127
11	Isolation of Novel Substrates Using a Tyrosine Kinase Overlay/ <i>In Situ</i> Assay Irwin H. Gelman	133
12	Manipulating Expression of Endogenous Oncogenic Proteins Using an Antisense Oligonucleotide Approach in Prostate Cancer Cells Daqing Wu, Ginger G. Wescott, and David M. Terrian	143
13	Measurements of Phospholipases A ₂ , C, and D (PLA ₂ , PLC, and PLD): <i>In Vitro</i> Microassays, Analysis of Enzyme Isoforms, and Intact-Cell Assays Julian Gomez-Cambronero, Joel Horwitz, and Ramadan I. Sha'afi	155
14	Detection of the Content and Activity of the Transcription Factor AP-1 in a Multistage Skin Carcinogenesis Model Yunfeng Zhao and Daret K. St. Clair	177
15	Fibroblastic, Hematopoietic, and Hormone Responsive Epithelial Cell Lines and Culture Conditions for Elucidation of Signal Transduction and Drug Resistance Pathways by Gene Transfer Linda S. Steelman, William L. Blalock, Xiao-Yang Wang, Phillip W. Moye, John T. Lee, John G. Shelton, Patrick M. Navolanic, Julianne M. Davis, Steven L. Knapp, Richard A. Franklin, Martyn K. White, and James A. McCubrey	185
16	Elucidation of Signal Transduction Pathways by Transfection of Cells with Modified Oncogenes Linda S. Steelman, William L. Blalock, Xiao-Yang Wang, Phillip W. Moye, John T. Lee, John G. Shelton, Patrick M. Navolanic, Julianne M. Davis, Steven L. Knapp, Richard A. Franklin, Martyn K. White, and James A. McCubrey	203
17	Elucidation of Signal Transduction Pathways by Retroviral Infection of Cells with Modified Oncogenes Linda S. Steelman, William L. Blalock, Xiao-Yang Wang, Phillip W. Moye, John T. Lee, John G. Shelton, Patrick M. Navolanic, Julianne M. Davis, Steven L. Knapp, Richard A. Franklin, Martyn K. White, and James A. McCubrey	221

PART III. PROTEIN INTERACTIONS

- 18 Methods for the Study of Protein–Protein Interactions
in Cancer Cell Biology
Daniel Price, Iha Park, and Hava Avraham 255
- 19 Production of Ligand-Specific Mutants
Using a Yeast Two-Hybrid Mating Assay
André Nantel 269
- 20 Coimmunoprecipitation Assay for the Detection
of Kinase–Substrate Interactions
Lucio Comai 277

PART IV. GENOMIC REARRANGEMENTS

- 21 Mutational Analysis of the Androgen Receptor Using Laser Capture
Microdissection and Direct Sequencing
**Sheila Greene, Patricia Stockton, Olga G. Kozyreva,
Kris E. Gaston, Gordon P. Flake, and James L. Mohler** 287
- 22 Clonality Analysis by T-Cell Receptor γ PCR
and High-Resolution Electrophoresis
in the Diagnosis of Cutaneous T-Cell Lymphoma (CTCL)
Ansgar Lukowsky 303
- Index 321



<http://www.springer.com/978-1-58829-075-5>

Cancer Cell Signaling
Methods and Protocols
Terrian, D.M. (Ed.)
2003, XV, 333 p., Hardcover
ISBN: 978-1-58829-075-5
A product of Humana Press