
Contents

Preface	v
Contributors	ix
1 Treatment of Tissue Sections for <i>In Situ</i> Hybridization Gregory H. Tesch, Hui Y. Lan, and David J. Nikolic-Paterson	1
2 Preparation of Template DNA and Labeling Techniques Peter J. Roche	9
3 <i>In Situ</i> Hybridization Using cRNA Probes: <i>Isotopic and Nonisotopic Detection Methods</i> Ian A. Darby, Teresa Bisucci, Alexis Desmoulière, and Tim D. Hewitson	17
4 Tyramide Signal Amplification for DNA and mRNA <i>In Situ</i> Hybridization Ernst J. M. Speel, Anton H. N. Hopman, and Paul Komminoth	33
5 Expression Analysis of Murine Genes Using <i>In Situ</i> Hybridization With Radioactive and Nonradioactively Labeled RNA Probes Anne Chotteau-Lelièvre, Pascal Dollé, and Françoise Gofflot	61
6 Nonradioactive <i>In Situ</i> Hybridization on Frozen Sections and Whole Mounts Julia Asp, Alexandra Abramsson, and Christer Betsholtz	89
7 <i>In Situ</i> Hybridization of Whole-Mount Embryos Murray Hargrave, Josephine Bowles, and Peter Koopman	103
8 <i>In Situ</i> Detection of Epstein–Barr Virus and Phenotype Determination of EBV-Infected Cells Gerald Niedobitek and Hermann Herbst	115
9 PNA– <i>In Situ</i> Hybridization Method for Detection of HIV-1 DNA in Virus-Infected Cells and Subsequent Detection of Cellular and Viral Proteins Tomoko Hagiwara, Junko Hattori, and Tsuguhiro Kaneda	139
10 Electron Microscopy and <i>In Situ</i> Hybridization: <i>Expression of P2Y₂ Receptor mRNA in the Cerebellum</i> Andrzej Loesch and Rainer Glass	151

11 *In Situ* Hybridization Using Riboprobes
on Free-Floating Brain Sections
Neil C. Owens, F. Martin Hess, and Emilio Badoer 163

12 An *In Situ* Hybridization Technique to Detect Low-Abundance
Slug mRNA in Adherent Cultured Cells
**Changsun Choi, Laurie G. Hudson, Pierre Savagner,
and Donna F. Kusewitt 173**

13 Identification of Transplanted Human Cells in Animal Tissues
Daniel Benten, Kang Cheng, and Sanjeev Gupta 189

14 *In Situ* Hybridization to Plant Tissues and Chromosomes
Andreas Houben, Sharon J. Orford, and Jeremy N. Timmis 203

15 Histochemical Localization of Cell Proliferation
Using *In Situ* Hybridization for Histone mRNA
**Tim D. Hewitson, Kristen J. Kelynack,
and Ian A. Darby 219**

16 Histochemical Localization of Apoptosis
With *In Situ* Labeling of Fragmented DNA
Tim D. Hewitson, Teresa Bisucci, and Ian A. Darby 227

17 The Use of Combined Immunohistochemical Labeling
and *In Situ* Hybridization to Colocalize mRNA
and Protein in Tissue Sections
Malcolm D. Smith, Michael Ahern, and Mark Coleman 235

18 Semiquantitative *In Situ* Hybridization
Using Radioactive Probes to Study Gene Expression
in Motoneuron Populations
Paul D. Storer and Tracey DeLucia 247

19 Quantitative *In Situ* Hybridization of Tissue Microarrays
**Adrian M. Jubb, Thinh Q. Pham, Gretchen D. Frantz,
Franklin V. Peale, Jr., and Kenneth J. Hillan 255**

Index 265

In Situ Hybridization Protocols

Darby, I.A.; Hewitson, T. (Eds.)

2006, XII, 270 p. 68 illus., 1 illus. in color., Hardcover

ISBN: 978-1-58829-402-9

A product of Humana Press