1. Record Nr. UNINA9911020111903321

Titolo	Genetic manipulation : techniques and applications / / edited by J.M. Grange, A. Fox & N.L. Morgan
Pubbl/distr/stampa	Oxford ; ; Boston, : Blackwell Scientific Publications, 1991
ISBN	9786612237263 9781282237261 1282237268 9781444314144 1444314149 9781444314137 1444314130
Descrizione fisica	1 online resource (417 p.)
Collana	The Society for Applied Bacteriology technical series ; ; no. 28
Altri autori (Persone)	GrangeJohn M FoxA <1927-> (Arnold) MorganN. L <1951-> (Neil L.)
Disciplina	575.10724 660/.65
Soggetti	Genetic engineering Biotechnology
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	"Based on the Society of Applied Bacteriology Autumn Meeting held at the South Bank Polytechnic, London, on 18 October 1989"--Pref.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Genetic Manipulation: Techniques and Applications; Contents; Contributors; Preface; Extraction, Purification and Assay of DNA; Isolation of DNA; Isolation of Plasmid DNA from Bacteria; Purification of DNA; Isolating Genomic DNA From Bacterial Cells; Isolating Mammalian DNA; Assay of DNA; References; Restriction Mapping of DNA; Restriction Enzymes; Approaches to Mapping; References; The Construction and Use of Cloning Vectors; The Commercially Available Vectors; The Construction of Vectors for Use with the Clostridia; References; Appendix I: Addresses of Suppliers of Cloning Vectors Appendix II: Addresses of Suppliers of Other Products Useful for Molecular BiologyAdaptor Based cDNA Cloning in the Phage Vectors lgt10 and lgt11; Experimental Methods; Results of cDNA Library

Analysis; Discussion; Acknowledgements; References; Plasmid Profiling and DNA/DNA Hybridization for Distinguishing Between Mesophilic Aeromonas Bacteria; DNA/DNA Hybridization; Plasmid Profiling; Methods; Results; Acknowledgements; References; Appendix: Reagents; Preparation and Screening of Bacterial Genomic Libraries; General Strategy; Construction of a Genomic Library by using lEMBL4
Screening of a lEMBL4 Library with Gene ProbesConstruction of a lgt11 Library and Screening with Antibodies; Acknowledgements; References; DNA Probes for Detection and Identification of Bacteria; Principle of Nucleic Acid Hybridization; Application of DNA Hybridization; The Polymerase Chain Reaction; References; Extraction and Purification of Eukaryotic mRNA; Basic Precautions Prior to RNA Extraction; RNA Extraction Protocols; Analysis of Purified RNA; Isolation of Polyadenylated mRNA from Total RNA; Storage of RNA Samples; Acknowledgements; References; cDNA Cloning
How Many Clones are Required?Cloning Strategies; First-strand Synthesis; Second-strand Synthesis; Preparation of the cDNA for Cloning; Methylation of the cDNA; Linker Kinase Reaction; Test of Ligation Efficiency; Ligation of the Phosphorylated Linkers to the cDNA; EcoRI Digestion and Removal of Excess Linkers from the cDNA; Size Fractionation of the Linkered cDNA; Ligating Fragments into pUC Vectors; Transformation of Host Bacteria; Screening for Recombinant Phages and Plasmids; References; Primer Extension Sequencing of RNA Viruses; Precautions when Handling RNA
Nucleotide Sequencing of Influenza Virus GenesPrimer Extension Sequencing of Influenza A Viruses; Primer Extension Sequencing of Flavivirus Genes; Comments; References; Appendix: Buffers and Reagents; Forensic Applications of DNA Profiling; MuItiIocus Probes; Single Locus Probes; Methods; DNA Profiling in Forensic Casework; References; Application of Nucleic Acid Probes to the Identification of Bacterial Enteric Pathogens; Identification of Enterotoxigenic Escherichia coli from Faecal Specimens; Gene Probes for other Bacterial Enteric Pathogens
Prospects for Nucleic Acid Probes in Clinical Microbiology

Sommario/riassunto

Genetic manipulation is no longer the province of the specialized researcher. It is finding widespread application in all fields of medicine and biology. Nevertheless, application of these relatively new techniques to new areas of research is often fraught with unexpected problems and difficulties. Based on the Society for Applied Bacteriology's Autumn 1989 Conference, this unique volume covers a wide and very up-to-date range of techniques used in genetic engineering. These include the isolation and analysis of DNA and RNA from cells and tissues, the selection and use of phage and plasmic vec