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Nota di contenuto	Intro -- ASSAY DEVELOPMENT -- CONTENTS -- FOREWORD -- PREFACE -- ACKNOWLEDGMENTS -- ABBREVIATIONS -- 1 INTRODUCTION TO ASSAY DEVELOPMENT -- 1.1 Assay and Bioassay -- 1.2 Drug Discovery Process and Role of Assays in the Process -- 1.3 Bioassay Development -- 1.4 Bioassay Classifications -- Useful Websites -- Bibliography -- 2 MEASUREMENT AND INSTRUMENTATION -- 2.1 Measurement and Perturbation -- 2.2 Common Instrumental Methods and Instrument Components -- 2.3 Molecular Absorption Measurements -- 2.4 Molecular Luminescence Measurements -- 2.5 Luminescence Lifetime Measurement and Time-Resolved Fluorescence Measurement -- 2.6 Fluorescence Resonance Energy Transfer (FRET) and Time-Resolved-FRET -- 2.7 Fluorescence Quenching -- 2.8 Fluorescence Polarization (FP) -- 2.9 Radioactivity Measurement -- 2.10 Evaluating and Selecting an Instrumental Method for Bioassay -- Useful Websites -- Bibliography -- 3 FUNDAMENTAL PRINCIPLES OF ASSAY DEVELOPMENT WITH ISOLATED PROTEINS -- 3.1 Chemical Potential, Equilibrium, and Kinetics -- 3.2 Protein Binding Studies at Equilibrium -- 3.3 Kinetic

Studies of the Protein Binding Process -- 3.4 Enzyme Kinetics -- 3.5 Inhibition of Protein Function -- 3.6 Assay Development with Isolated Proteins -- Useful Websites -- Bibliography -- 4 SEPARATION-BASED TECHNIQUES IN BIOASSAYS -- 4.1 Washing Solid Supports to Remove Impurities -- 4.2 Organic Solvent Extraction of Hydrophobic Molecules -- 4.3 Centrifugation to Remove Dense Particles -- 4.4 Membrane Filtration -- 4.5 Liquid Chromatography -- 4.6 Electrophoresis -- Useful Websites -- Bibliography -- 5 GENERAL PROTEIN BINDING ASSAY FORMATS -- 5.1 Equilibrium Dialysis -- 5.2 Competitive Binding Assays with Radioactive or Other Labeled Ligands -- 5.3 Application of SPA and FlashPlate in Binding Studies -- 5.4 Application of Fluorescence Polarization (FP) in Binding Studies.
5.5 Application of FRET Assays in Binding Studies -- 5.6 Application of ELISA in Binding Studies -- 5.7 Surface Plasmon Resonance (SPR) Technology and Its Application in Binding Studies -- 5.8 Application of Label-Free Technologies in Binding Studies -- Useful Websites -- Bibliography -- 6 FUNCTIONAL ASSAYS WITH ISOLATED PROTEASES -- 6.1 Introduction to Proteases and Their Substrates -- 6.2 Function of Proteases and Their Role in Drug Discovery -- 6.3 Protease Assays -- 6.4 Protease Substrate Profiling -- 6.5 Protease Inhibitors -- 6.6 Assay Development for Caspases with a Fluorogenic Substrate -- 6.7 Assay Development for Carboxypeptidase U (EC 3.4.17.20) -- Useful Websites for Proteases -- Bibliography -- 7 FUNCTIONAL ASSAYS FOR PROTEIN KINASES -- 7.1 Introduction to Protein Kinases -- 7.2 Substrates for In Vitro Kinase Assays -- 7.3 Kinase Assay Development Strategies -- 7.4 Kinase Assay Based on Detection of Phosphorylated Product -- 7.5 Kinase Assays by Measuring the Generation of ADP -- 7.6 Kinase Assays by Measuring the Depletion of ATP -- 7.7 Kinase Assays by Measuring the Depletion of Peptide Substrate -- 7.8 Kinase Assays by Simultaneous Measurement of Both Product and Substrate -- 7.9 Example of a Kinase Assay Development in HTRF Format -- Useful Websites -- Bibliography -- 8 FUNDAMENTAL PRINCIPLES OF CELL-BASED ASSAYS -- 8.1 Cell Signaling, Signal Transduction, and Cellular Responses -- 8.2 General Approaches in Cell-Based Assays -- 8.3 Concept of Affinity and Efficacy in Cell-Based Assays -- 8.4 Development of Cell-Based Assays -- Useful Websites -- Bibliography -- 9 FUNCTIONAL ION CHANNEL ASSAYS -- 9.1 Introduction to Ion Channels -- 9.2 Strategies for Ion Channel Assays -- 9.3 Electrophysiological Methods -- 9.4 Ion Flux Methods -- 9.5 Membrane Potential Sensing Methods -- 9.6 Selecting Suitable Assays for Ion Channel Studies.
Useful Websites and Vendors -- Bibliography -- 10 ASSAYS WITH GPCRs -- 10.1 Introduction to GPCRs and G Proteins -- 10.2 G Protein-Coupled Receptor Activation and Signal Transduction -- 10.3 Strategies of GPCR Assay Development -- 10.4 G Protein-Coupled Receptor Assays by Measuring the Extent of GTP Binding to G() -- 10.5 G Protein-Coupled Receptor Assays Based on Measurement of cAMP -- 10.6 G Protein-Coupled Receptor Assays Based on Measurement of Intracellular Inositol Phospholipids -- 10.7 G Protein-Coupled Receptor Assays Based on Measurement of Intracellular Ca(2+) -- 10.8 G Protein-Coupled Receptor Assays Based on Measurement of MAPK Activity -- 10.9 G Protein-Coupled Receptor Assays with Reporter Gene -- 10.10 G Protein-Coupled Receptor Assays by Monitoring Events Leading to GPCR Internalization -- Useful Websites -- Bibliography -- 11 ASSAYS BASED ON INTEGRATED CELL SYSTEM PROPERTIES -- 11.1 Cell Viability, Proliferation, and Cytotoxicity Assays -- 11.2 Measurement of Extracellular Indicators of Cellular Metabolism -- 11.3 Measurement of Cell's Effect on Electrical Impedance -- 11.4

Measurement of Protein Secretion from Cells -- 11.5 Measurement of Discoloration of Melanophore Cells -- 11.6 Measurement of Cell Motility -- Useful Websites -- Bibliography -- 12 HIGH-CONTENT CELL-BASED ASSAY WITH OPTICAL IMAGING TECHNIQUES -- 12.1 Sample Preparation -- 12.2 Cellular Image Collection -- 12.3 Image Abstraction, Analysis, and Data Management -- 12.4 Applications of iCHCS -- Useful Websites -- Bibliography -- 13 HIGH-THROUGHPUT SCREENING -- 13.1 Introduction -- 13.2 Molecular or Cellular Targets and Assay Development -- 13.3 Compound Library Management -- 13.4 Hardware Module -- 13.5 Software Module -- 13.6 HTS Operation Management -- 13.7 Building an HTS Operation for Biopharmaceutical Discovery.
13.8 Quality Control and Data Analysis in Primary Screening -- Useful Websites -- Bibliography -- 14 CASE STUDY: DEVELOPMENT OF A MICROFLUIDIC-BASED KINASE ASSAY PLATFORM -- 14.1 Background of Microfluidic Technology and Its Application in Bioassays -- 14.2 The Original Mobility Shift Kinase Assay Format -- 14.3 Realizing the Flaws in the Original Kinase Assay Format -- 14.4 Searching for Alternative Kinase Assay Methods -- 14.5 Development of the Off-Chip Kinase Assay Format -- 14.6 Current Stage of Microfluidic Technology in Bioassays -- 14.7 Appendix: Poster Presented at the 2002 Society for Biomolecular Screening Annual Meeting: Analysis of Mobility Shift Data Obtained from Labchip in Kinase Assay -- Useful Websites -- Bibliography -- INDEX.

Sommario/riassunto

Essential principles and practice of assay development The first comprehensive, integrated treatment of the subject, Assay Development: Fundamentals and Practices covers the essentials and techniques involved in carrying out an assay project in either a biotechnology/drug discovery setting or a platform setting. Rather than attempting comprehensive coverage of all assay development technologies, the book introduces the most widely used assay development technologies and illustrates the art of assay development through a few commonly encountered biological targets in assay development (e.g., proteases, kinases, ion channels, and G protein-coupled receptors). Just enough biological background for these biological targets is provided so that the reader can follow the logics of assay development. Chapters discuss: * The basics of assay development, including foundational concepts and applications * Commonly used instrumental methods for both biochemical assays and cell-based assays * Assay strategies for protein binding and enzymatic activity * Cell-based assays * High-throughput screening An in-depth study of the now popular Caliper's off-chip kinase assay provides an instructive, real-world example of the assay development process.