1. Record Nr. UNINA9910458689403321

Titolo	Membrane protein purification and crystallization [[electronic resource]] : a practical guide / / edited by Carola Hunte and Gebhard von Jagow and Hermann Schagger
Pubbl/distr/stampa	Amsterdam ; ; Boston, : Academic Press, c2003
ISBN	1-281-02929-7 9786611029296 0-08-053617-4
Edizione	[2nd ed.]
Descrizione fisica	1 online resource (339 p.)
Altri autori (Persone)	JagowGebhard von SchaggerHermann
Disciplina	572/.696
Soggetti	Membrane proteins - Purification Electronic books.
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Front Cover; Membrane Protein Purification and Crystallization: A Practical Guide; Copyright Page; Contents; Contributors; Preface; PART I: STRATEGIES AND TECHNIQUES; Chapter 1. Purification Strategies for Membrane Proteins; I. Introduction; II. General Guide for Retaining Catalytic Activity; III. Choice and Sequence of Purification Techniques; IV. Choice of Protein Source, Disruption of Cells, and Preparation of Organelles and Membranes; V. Protein Assay; VI. Solubilization and Stabilization of Membrane Proteins; References Chapter 2. Techniques and Basic Operations in Membrane Protein Purification I. Introduction; II. Solubilization-Precipitation; III. Concentration of Samples, Exchange of Buffer, and Exchange of Detergent; IV. Chromatographic Techniques; References; Chapter 3. Production and Purification of Recombinant Membrane Proteins; I. Introduction; II. Prokaryotic Expression Systems for Overproduction of Membrane Proteins for Structural Studies; III. Eukaryotic Expression Systems for Overproduction of Membrane Proteins; IV. Use of Fusion Proteins and Affinity Tags for Purification of Membrane Proteins Acknowledgments References; Chapter 4. SDS Electrophoresis

Techniques; I. Introduction; II. Choice of Optimal SDS-Page System and Gel Type; III. Tricine-SDS-PAGE; IV. Recovery of Proteins from SDS Gels; V. Processing of Proteins Recovered from Gels for Immunization and Protein Sequencing; VI. Electroblotting; References; Chapter 5. Blue Native Electrophoresis; I. Introduction; II. Techniques; III. Applications; References; Chapter 6. Preparative Isoelectric Focusing; I. Introduction; II. Techniques; III. Application: Purification of Photosystem I; IV. Conclusions; References
Chapter 7. Membrane Protein CrystallizationI. Introduction; II. Bottlenecks in Membrane Protein Crystallization; References; PART II: DISCUSSION OF SELECTED ISOLATION PROTOCOLS; Chapter 8. Lipid-Dependent Inactivation and Reactivation of Bovine Complex III; I. Introduction; II. Lipid-Dependent Inactivation and Reactivation; References; Chapter 9. Purification of an Affinity-Epitope Tagged G-Protein Coupled Receptor; I. Introduction; II. Production of Recombinant 2-Adrenergic Receptor in Pichia pastoris; III. Preparation of Pichia pastoris Membranes; IV. Solubilization of Membranes
V. Purification of the 2-Adrenergic Receptor VI. Ligand Binding Assays; References; Chapter 10. Purification of NhaA Na+ /H+ Antiporter of Escherichia Coli for 3D or 2D Crystallization; I. Introduction; II. Growth of Escherichia coli for Production of His-Tagged NhaA in a 10 1 Fermenter; III. Isolation of Membranes from Escherichia coli TA16/pAXH Strain; IV. Two-Step Purification of His-Tagged NHaA; V. NhaA Reconstitution into Liposomes and Activity Assay; VI. Dynamic Light Scattering Experiments; Acknowledgments; References; Chapter 11. Purification of the Cytochrome bc1 Complex from Yeast
I. Introduction

Sommario/riassunto

This second edition of Membrane Protein Purification and Crystallization, A Practical Guide is written for bench scientists working in the fields of biochemistry, biology, and proteomic research. This guide presents isolation and crystallization techniques in a concise form, emphasizing the critical aspects unique to membrane proteins. It explains the principles of the methods and provides protocols of general use, permitting researchers and students new to this area to adapt these techniques to their particular needs. This edition is not only an update but is comprised mainly of new