

RECONSTITUTION OF MEMBRANE BUDDING WITH UNILAMELLAR VESICLES

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Contents

1. Introduction	56
2. M Protein Purification	57
3. Evaluation of the Membrane Activity of M Protein Through its Interaction with Intermediate-Sized Unilamellar Liposomes	58
3.1. Remarks about IUV formation and characterization	58
3.2. IUV preparation	59
3.3. Analysis of M protein binding to IUVs of different lipid compositions	61
3.4. M protein interaction with IUVs: Leakage of aqueous dyes	65
4. Reconstitution of M-Protein-Driven Membrane Budding on GUVs	66
4.1. GUV preparation	66
4.2. Interaction of M protein with GUVs	69
5. Concluding Remarks	73
References	73

Abstract

Enveloped virus particles select their lipid-protein components and egress by budding from the host cell membranes. The matrix protein of many enveloped viruses has been proposed as a crucial element for viral budding; however, molecular mechanisms behind membrane remodeling by the matrix protein are yet to be unraveled. Here, we describe a set of *in vitro* functional reconstitution assays that allow quantitative evaluation of both, membrane binding and creation of membrane curvature by the matrix protein isolated from Newcastle Disease Virus. Individual budding events orchestrated by the matrix protein can be resolved in real time. The assays may be applied for direct reconstitution of the on-membrane action of cellular proteins involved in membrane curvature induction upon binding *in vivo*.

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Table of Contents Liposomes Part F Volume 464 Methods In Enzymology

1. Understanding the eBook Liposomes Part F Volume 464 Methods In Enzymology
 - The Rise of Digital Reading Liposomes Part F Volume 464 Methods In Enzymology
 - Advantages of eBooks Over Traditional Books
2. Identifying Liposomes Part F Volume 464 Methods In Enzymology
 - Exploring Different Genres
 - Considering Fiction vs. Non-Fiction
 - Determining Your Reading Goals
3. Choosing the Right eBook Platform
 - Popular eBook Platforms
 - Features to Look for in an Liposomes Part F Volume 464 Methods In Enzymology
 - User-Friendly Interface
4. Exploring eBook Recommendations from Liposomes Part F Volume 464 Methods In Enzymology
 - Personalized Recommendations
 - Liposomes Part F Volume 464 Methods In Enzymology User Reviews and Ratings
 - Liposomes Part F Volume 464 Methods In Enzymology and Bestseller Lists
5. Accessing Liposomes Part F Volume 464 Methods In Enzymology Free and Paid eBooks
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 - ePub, PDF, MOBI, and More
 - Liposomes Part F Volume 464 Methods In Enzymology Compatibility with Devices
 - Liposomes Part F Volume 464 Methods In Enzymology Enhanced eBook Features
7. Enhancing Your Reading Experience
 - Adjustable Fonts and Text Sizes of Liposomes Part F Volume 464 Methods In Enzymology
 - Highlighting and Note-Taking Liposomes Part F Volume 464 Methods In Enzymology
 - Interactive Elements Liposomes Part F Volume 464 Methods In Enzymology
8. Staying Engaged with Liposomes Part F Volume 464 Methods In Enzymology
 - Joining Online Reading Communities
 - Participating in Virtual Book Clubs
 - Following Authors and Publishers Liposomes Part F Volume 464 Methods In Enzymology
9. Balancing eBooks and Physical Books Liposomes Part F Volume 464 Methods In Enzymology
 - Benefits of a Digital Library
 - Creating a Diverse Reading Collection Liposomes Part F Volume 464 Methods In Enzymology
10. Overcoming Reading Challenges
 - Dealing with Digital Eye Strain
 - Minimizing Distractions
 - Managing Screen Time
11. Cultivating a Reading Routine Liposomes Part F Volume 464 Methods In Enzymology
 - Setting Reading Goals Liposomes Part F Volume 464 Methods In Enzymology
 - Carving Out Dedicated Reading Time
12. Sourcing Reliable Information of Liposomes Part F Volume 464 Methods In Enzymology
 - Fact-Checking eBook Content of Liposomes Part F Volume 464 Methods In Enzymology
 - Distinguishing Credible Sources
13. Promoting Lifelong Learning
 - Utilizing eBooks for Skill Development
 - Exploring Educational eBooks
14. Embracing eBook Trends
 - Integration of Multimedia Elements

- Interactive and Gamified eBooks

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