
Preface

Since the discovery that protein kinase C (PKC) transduces the abundance of signals that result in phospholipid hydrolysis, this enzyme has been at the forefront of research in signal transduction. *Protein Kinase C Protocols* covers fundamental methods for studying the structure, function, regulation, subcellular localization, and macromolecular interactions of PKC.

Protein Kinase C Protocols is divided into 11 sections representing the major aspects of PKC regulation and function. Part I contains an introduction and a historical perspective on the discovery of PKC by Drs. Yasutomi Nishizuka and Ushio Kikkawa. Part II describes methods to purify PKC. Part III describes the standard methods for measuring PKC activity: its enzymatic activity and its stimulus-dependent translocation from the cytosol to the membrane. Part IV describes methods for measuring the membrane interaction of PKC in vivo and in vitro. Part V provides methodologies and techniques for measuring the phosphorylation state of PKC, including a protocol for measuring the activity of PKC's upstream kinase, PDK-1. Novel methods for identifying substrates are described in Part VI. Part VII presents protocols for expressing and analyzing the membrane targeting domains of PKC. Part VIII provides a comprehensive compilation of methods used to identify binding partners for PKC. Part IX describes pharmacological probes used to study PKC. The book ends with a presentation of genetic approaches to study PKC (Part X) and a discussion of approaches used to study PKC in disease (Part XI). Each section begins with an introduction placing the protocols in the context of PKC function or regulation.

Protein Kinase C Protocols is targeted to biochemists, cell biologists, and molecular biologists whose research has brought them to PKC, as well as to PKC researchers who may need more information in new and developing methodologies.

Alexandra C. Newton