

# METHODS IN MOLECULAR BIOLOGY

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# **Cell Cycle Control**

## **Mechanisms and Protocols**

### **Second Edition**

Edited by

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 **Humana Press**

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ISSN 1064-3745                      ISSN 1940-6029 (electronic)  
ISBN 978-1-4939-0887-5          ISBN 978-1-4939-0888-2 (eBook)  
DOI 10.1007/978-1-4939-0888-2  
Springer New York Heidelberg Dordrecht London

Library of Congress Control Number: 2014938993

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Printed on acid-free paper

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## Preface

Modern cell cycle research began by elucidating the functions of cyclin-dependent kinases (CDKs). Subsequent investigations have revealed that the cell cycle is coordinated through a complex network of various cellular processes. Defects in this control system can lead to genetic instability and drive an array of genetic disorders, most notably, cancer. It is thus essential to holistically understand how the cell cycle is governed and how this regulation affects other cellular processes and homeostasis. It is noteworthy that much of what is known about cell cycle regulation depends heavily on enormous research efforts using a variety of model organisms, from yeast to mammals. The basic knowledge and techniques used in these model systems have been well documented in the previous cell cycle protocol book. In this new volume, *Cell Cycle Control: Mechanisms and Protocols, Second Edition*, which consists of a completely new set of reviews and protocols, we provide a comprehensive guide to technical and theoretical advancements in the field. Beginning with the overviews of various cell cycle regulations, we present the most current protocols and state-of-the-art techniques used to generate latest findings in cell cycle regulation. We believe that this title will be a valuable resource for a wide audience, ranging from the experienced cell cycle researchers looking for new approaches to the junior graduate students giving their first steps in cell cycle research.

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