

1. Record Nr.	UNINA9910298452703321
Titolo	Proteases in Apoptosis: Pathways, Protocols and Translational Advances // edited by Kakoli Bose
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2015
ISBN	3-319-19497-6
Edizione	[1st ed. 2015.]
Descrizione fisica	1 online resource (258 p.)
Disciplina	570
Soggetti	Apoptosis Medicine Medical biochemistry Biomedicine, general Medical Biochemistry
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 at the end of each chapters and index.
Nota di contenuto	Apoptosis: Pathways, Molecules and Beyond -- Caspases - key players in apoptosis -- Calpains and Granzymes: non-caspase proteases in cell death -- Cathepsins and HtrAs - multitasking proteases in programmed cell death -- Proteases in Apoptosis: Protocols and Methods -- Preclinical Animal Model and Non-invasive Imaging in Apoptosis.
Sommario/riassunto	This book provides a comprehensive overview of the proteases involved in programmed cell death. It presents a focused yet extensive discussion on proteolytic enzymes such as caspases, HtrAs, granzymes, calpains and cathepsins as well as laboratory protocols related to enzymology and apoptosis. Mouse model systems and non-invasive imaging techniques in apoptosis-related diseases such as cancer and neurodegeneration are also covered in this book. While slowly unravelling the complexities of apoptosis in chapter one, the next three chapters individually elaborate on different classes of proteases that play key roles in the initiation, progression and execution of programmed cell death. The last two chapters complete this discussion by describing different laboratory methodologies and therapeutic

advances involving apoptotic proteases. Protocols portraying in vitro and ex vivo colorimetric and fluorescence-based enzyme kinetic studies as well as cell death assays are explained in the fifth chapter. Preclinical in vivo models and non-invasive imaging in apoptosis to understand the complexities of disease progression and their contribution toward therapeutics are recounted in the last chapter. The book spans topics related to both fundamental and applied biology. It would therefore be equally appealing and informative to scientists working in the field of apoptosis and those who are investigating mechanisms of proteases and enzymes in general. The protocols would certainly benefit both graduate and undergraduate students working in the related fields and provide useful leads for drug design to translational biologists involved in neurodegeneration and cancer research.
