1. Record Nr. UNINA9910617304203321

Titolo	PI3K and AKT Isoforms in Immunity : Mechanisms and Therapeutic Opportunities / / edited by Margarita Dominguez-Villar
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2022
ISBN	9783031065668 9783031065651
Edizione	[1st ed. 2022.]
Descrizione fisica	1 online resource (462 pages)
Collana	Current Topics in Microbiology and Immunology, , 2196-9965 ; ; 436
Disciplina	616.079
Soggetti	Immunology Immune system Cellular signal transduction Cytology Autoimmunity Immunospecificity Immune Cell Signalling Cell Biology Adaptive Immunity Fosfatidilinositols Immunitat cel·lular Llibres electrònics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Class I PI3K biology -- Class II PI3K biology -- Class III PI3K biology -- PTEN in immunity -- PHLPP Signaling in Immune Cells -- PHLPP Signaling in Immune Cells -- PI3K isoforms in cell signalling and innate immune cell responses -- AKT isoforms in macrophage activation, polarization and survival -- Control of CD4+ T cell Differentiation and Function by PI3K isoforms. -- PI3K isoforms in CD8+ T cell development and function -- PI3K isoforms in B cells -- PI3K isoform signalling in platelets -- PI3K isoforms in vascular biology, a focus on the vascular system-immune response connection -- PI3K and AKT at

the Interface of Signaling and Metabolism -- The Role of PI3K Isoforms in Autoimmune Disease -- AKT Isoforms in the Immune Response in Cancer -- PI3K isoform immunotherapy for solid tumours -- PI3K targeting in non-solid cancer -- AKT isoforms as a target in cancer and immunotherapy -- Developing PI3K Inhibitors for Respiratory Diseases.

Sommario/riassunto

This book provides an essential overview of the role of phosphoinositide-3-phosphate kinase (PI3K) isoforms in modulating the function of immune system cells and their involvement in disease. PI3K is a family of kinases involved in basic cellular processes such as proliferation, migration and cell death. Recent work has highlighted the multiple roles of PI3K classes and subunits and their involvement in the immune response to the body's own and foreign antigens and diseases such as cancer and autoimmunity. This book offers a detailed introduction to the biology of the three PI3K classes, followed by an extensive discussion of the diverse roles of AKT and PI3K isoforms in immune cells. Based on this knowledge, it subsequently explains in more detail how specific isoforms are connected to immune-mediated diseases. The book concludes by highlighting the latest advances in the production of isoform-specific inhibitors and their use in various human diseases. This book is intended as a reference guide for students and researchers interested in the multifaceted aspects of PI3K biology.