1. Record Nr. UNINA9910141264403321

Autore	Levitan Irena
Titolo	Cholesterol Regulation of Ion Channels and Receptors [[electronic resource]]
Pubbl/distr/stampa	Hoboken, : Wiley, 2012
ISBN	1-280-87984-X 9786613721150 1-118-34230-5 1-118-34231-3 1-118-34228-3
Descrizione fisica	1 online resource (324 p.)
Altri autori (Persone)	BarrantesFrancisco
Disciplina	572.5795 612.1/2 612.12
Soggetti	Cholesterol - metabolism Cholesterol -- metabolism Ion Channels - metabolism Ion Channels -- metabolism Membrane Proteins - metabolism Membrane Proteins -- metabolism Cholesterol - Metabolism Ion channels - Metabolism Membrane proteins - Metabolism Proteins Membrane Glycoproteins Sterols Membrane Transport Proteins Metabolic Phenomena Cholestenes Amino Acids, Peptides, and Proteins Carrier Proteins Cholestanes Membrane Lipids Lipids Steroids Drugs Polycyclic Compounds Cholesterol

	Ion Channels Metabolism Membrane Proteins Human Anatomy & Physiology Health & Biological Sciences Animal Biochemistry
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di contenuto	CHOLESTEROL REGULATION OF ION CHANNELS AND RECEPTORS; CONTENTS; FOREWORD; PREFACE; CONTRIBUTORS; I CHOLESTEROL REGULATION OF MEMBRANE PROPERTIES; 1 CHOLESTEROL TRAFFICKING AND DISTRIBUTION BETWEEN CELLULAR MEMBRANES; 1.1 CHOLESTEROL-AN ESSENTIAL LIPID FOR NORMAL CELL FUNCTION; 1.2 CHOLESTEROL METABOLISM, SENSING, AND DISTRIBUTION BETWEEN CELLULAR MEMBRANES; 1.3 HOW DOES CHOLESTEROL ENTER MAMMALIAN CELLS?; 1.4 VESICULAR CHOLESTEROL TRAFFICKING ALONG THE ENDOCYTIC AND SECRETORY PATHWAY; 1.5 NONVESICULAR CHOLESTEROL TRANSPORT; 1.6 CHOLESTEROL EFFLUX FROM CELLS; REFERENCES 2 CHOLESTEROL REGULATION OF MEMBRANE PROTEIN FUNCTION BY CHANGES IN BILAYER PHYSICAL PROPERTIES-AN ENERGETIC PERSPECTIVE2.1 INTRODUCTION; 2.2 CHOLESTEROL REGULATION OF MEMBRANE PROTEINS: POSSIBLE MECHANISMS; 2.3 PROTEIN REGULATION BY CHOLESTEROL-INDUCED CHANGES IN BILAYER PHYSICAL PROPERTIES; 2.4 CHOLESTEROL-INDUCED CHANGES IN DGIII bilayer - QUANTITATIVE ESTIMATES; 2.5 METHODS FOR IDENTIFYING PROTEIN REGULATION BY CHANGES IN BILAYER PHYSICAL PROPERTIES; 2.6 CHOLESTEROL REGULATION OF MEMBRANE PROTEINS IN LIVING CELLS 2.7 PHYSIOLOGICAL ROLE OF CHOLESTEROL-INDUCED CHANGES IN BILAYER PHYSICAL PROPERTIES2.8 CONCLUSION; REFERENCES; II CHOLESTEROL REGULATION OF ION CHANNELS; 3 INSIGHTS INTO STRUCTURAL DETERMINANTS OF CHOLESTEROL SENSITIVITY OF KIR CHANNELS; 3.1 INTRODUCTION; 3.2 CHOLESTEROL SUPPRESSES Kir2 ACTIVITY IN VITRO AND IN VIVO; 3.3 EVIDENCE FOR SPECIFIC STEROL-PROTEIN INTERACTIONS IN THE REGULATION OF Kir CHANNELS; 3.4 STRUCTURAL DETERMINANTS OF CHOLESTEROL SENSITIVITY OF Kir2 CHANNELS; 3.5 PHYSIOLOGICAL IMPACT OF CHOLESTEROL-INDUCED SUPPRESSION OF KIR2 CHANNELS 3.6 CONCLUDING REMARKS AND FUTURE DIRECTIONSACKNOWLEDGMENTS; REFERENCES; 4 ROLE OF LIPID RAFTS IN THE REGULATION OF STORE-OPERATED CA2+ CHANNELS; 4.1 INTRODUCTION; 4.2 MOLECULAR COMPONENTS OF SOCE; 4.3 LIPID RAFT DOMAINS AND CAVEOLAE; 4.4 THE ROLE OF LIPID RAFT DOMAINS IN THE REGULATION OF TRPC1; 4.5 MOLECULAR COMPLEXITY IN THE REGULATION OF SOCE; 4.6 CONCLUSIONS; REFERENCES; 5 CHOLESTEROL REGULATION OF CARDIAC ION CHANNELS; 5.1 INTRODUCTION; 5.2 EFFECT OF CHOLESTEROL ON CARDIAC EXCITABILITY; 5.3 MECHANISMS OF CHOLESTEROL EFFECTS ON ION

CHANNELS
5.4 CHOLESTEROL AS A TARGET FOR THERAPEUTIC AGENTSREFERENCES; 6 DIFFERENTIAL CONTRIBUTION OF BK SUBUNITS TO NONGENOMIC REGULATION OF CHANNEL FUNCTION BY STEROIDS; 6.1 BK CHANNELS AND STEROIDS; 6.2 CONCLUSIONS; ACKNOWLEDGMENTS; REFERENCES; 7 REGULATION OF K+ CHANNELS BY CHOLESTEROL-RICH MEMBRANE DOMAINS IN THE IMMUNE SYSTEM; 7.1 POTASSIUM CHANNELS IN THE IMMUNE SYSTEM; 7.2 REGULATION OF POTASSIUM CHANNELS BY MEMBRANE CHOLESTEROL AND LIPID RAFT MICRODOMAINS; 7.3 LOCALIZATION OF MAJOR VOLTAGE-DEPENDENT Kv1.3 AND Kv1.5 CHANNELS IN CHOLESTEROL-RICH MEMBRANE MICRODOMAINS IN LEUKOCYTES
7.4 MECHANISMS OF ION CHANNEL REGULATION: THE IMMUNOLOGICAL SYNAPSE

Sommario/riassunto

Examines new research on the role of cholesterol in regulating ion channels and receptors and its effect on health Drawing together and analyzing all the latest research findings, this book explores the role of cholesterol in the regulation of ion channels and receptors, including its pathological effects. It is the first book to comprehensively describe the complex mechanisms by which cholesterol regulates two major classes of membrane proteins. Moreover, it sheds new light on how cholesterol affects essential cellular functions such as the contraction of the heart, propagatio