1.	Record Nr.	UNINA9910144556903321
	Titolo	Immunodominance [[electronic resource]] : the choice of the immune system / / edited by Jeffrey A. Frelinger
	Pubbl/distr/stampa	Weinheim, : Wiley-VCH Chichester, : John Wiley [distributor], 2006
	ISBN	1-280-85434-0 9786610854349 3-527-60802-8 3-527-60737-4
	Descrizione fisica	1 online resource (316 p.)
	Altri autori (Persone)	FrelingerJeffrey A
	Disciplina	616.079
	Soggetti	Immune response - Regulation Antigenic determinants - Research Electronic books.
	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 and index.
	Nota di contenuto	Immunodominance; Contents; Preface; List of Contributors; Color Plates; I Mechanics of Antigen Processing; 1 Class I MHC Antigen Processing; 1.1 Introduction; 1.2 Properties of MHC; 1.2.1 Structure of MHC; 1.2.2 Polymorphic Residues Generate Specificity Pockets; 1.3 Properties of Peptides; 1.3.1 Peptides That Bind Are Not Random Sequences; 1.3.2 Peptide-binding Motifs; 1.3.3 Peptide Length Is Limited in Class I MHC Peptides; 1.3.4 Binding Affinity; 1.3.5 Molecular Recognition; 1.3.6 Epitope Prediction; 1.4 Cytosolic Processing; 1.4.1 The Proteasome; 1.4.2 The Immunoproteasome 1.4.3 Opening the Immunoproteasome1.4.4 Peptide Trimming; 1.4.5 Association of the Proteasome with the Endoplasmic Reticulum; 1.5 Peptide Transport; 1.5.1 Transport via TAP; 1.5.2 TAP Selectivity; 1.5.3 TAP-independent Peptide Transport; 1.5.3.1 Endogenous Peptides; 1.5.3.2 Exogenous Peptides; 1.6 Class I MHC Maturation and Peptide Loading; 1.6.1 ER Chaperones: Calnexin, Calreticulin, ERp57, and Tapasin; 1.6.1.1 Calnexin; 1.6.1.2 Tapasin; 1.6.1.3 ERp57; 1.6.1.4 Calreticulin; 1.6.2 Peptide Loading; 1.7 Immunodominance and Class I

MHC Peptide Processing

2 The Mechanics of Class II Processing: Establishment of a Peptide Class II Hierarchy2.1 General Overview; 2.1.1 Immunodominance and Crypticity; 2.1.2 The Impact of T-Cell Repertoire in the Experimental Analysis of Immunodominance; 2.1.3 Different Antigen-presenting Cells Have Different Functions; 2.1.4 The Phases of Antigen Processing; 2.2 Phase I: MHC Class II Biosynthesis and Delivery to Peptide-loading Compartments; 2.2.1 Invariant Chain Isoforms; 2.2.2 Effects of Cell Signaling on MHC Class II Transport; 2.3 Phase II: Antigen Internalization and Processing

2.3.1 BCR-mediated Antigen Internalization2.3.2 Dendritic Cells and Macrophages; 2.4 Phase III: Formation and Expression of Antigenic Peptide by MHC Class II Molecules; 2.4.1 Proteolytic Antigen Processing; 2.4.2 Class II Peptide Loading; 2.4.2.1 DM; 2.4.2.2 DO; 2.4.2.3 DO-, DM-, and BCR-Mediated Antigen Processing; 2.4.2.4 The Distribution of MHC Class II and Other Proteins Within MIIC; 2.4.3 Cell-surface Delivery of Peptide-Class II Complexes; 2.4.3.1 Exosomes; 2.4.3.2 Signaling Properties of Peptide-Class II Complexes; 2.5 Conclusions; Acknowledgments

3 The Phenomenon of Immunodomination: Speculations on the Nature of Immunodominance3.1 Introduction; 3.2 MHC Binding, Cellular Processing, and T-Cell Repertoire are Major Determinants of Immunodominance; 3.3 Previous Systematic Analysis of Immunodominance by Our Group; 3.4 Cellular and Molecular Events in Immunodomination; 3.5 Speculations on the Mechanism of Immunodomination; 3.5.1 Involvement of APCs; 3.5.2 Possible Involvement of the Immune Synapse in Immunodomination; 3.5.3 The Potential Role of MTOC in Immunodomination; 3.6 Significance of Studying Immunodominance for Vaccine Development
3.7 Conclusions

Sommario/riassunto	This very first handbook on the topic summarizes the current concepts and brings together in one volume the critical arguments concerning the mechanisms relevant to immunodominance. In invited chapters written by the leaders in the field, the mechanisms whereby the immune system chooses the parts of a recognized pathogen in order to start the immune response are explained and the variety of biologic processes are identified that contribute to that choice. From the contents:* Mechanics of antigen processing* Proteosome specificity and immuno-proteosomes* Effect of the T cell re