<<过敏性疾病的多学科解决途径>>

图书基本信息

内容概要

Allergy is an immunological disease caused by multiple facto and characterized by variability, specificity and complexity. Multidis-ciplinary Approaches to Allergies cove dive e aspects ranging from basic molecular mechanisms to societal issues within the framework of multidisciplinary approaches to allergies. It contai 29 chapte in 6 parts： General Allergy; Allergenic Sources and Allerge ; Diagnosis; Therapies and Pharmacy; Hypoallergenic Products; Environment, Hygiene and Societal Issues. It can be used in education and research as introductory and supplementary material. It is also an indispe able tool for scientists and docto who are searching for an integrated way for allergy prevention, treatment and management.

书籍目录

章节摘录

版权页： 插图： 7.3.3 T－Cell Epitope Mapping Using the ELISPOT ApproachThe ELISPOT assay is widely used to detect antigen－specific immune responses totarget antigens. This method is especially useful to measure both clonal size andeffector function of low－frequency antigen－specific T－cell populations directly exvivo （Wulf et al.， 2009） and is based on the principle that memory CD4+ T－cellssecrete effector cytokines upon contact with the antigen. PBMCs are treated withthe peptide， followed by cytokine assessment after stimulation during 24 h（Anthony and Lehmann， 2003）. This assay is a kind of intracellular cytokinestaining assay， which is categorized into a fast and high resolution approach atsingle cell level. Compared with other assays， it is one or two orders of magnitudemore sensitive than the flow cytometry－based techniques， and it is one of the fewmmune monitoring assays that can be performed with cyropreserved PBMCssamples without significant loss of activity. The disadvantages of this techniqueare the subjectivity due to manual reading of the plates， and the need for cellseparation to discriminate between antigen－specific responses derived from CD4+T－cells and CD8+ T－cells. Now， several additional reasons also have contributed tothe main－stream use of the EL1SPOT assay. The IFN－8 ELISPOT assay and IL－4ELISPOT have successfully been used to map T－cell epitopes. For example， byusing this technique， antagonists and non－toxic variants of wheat gliadin T－cellepitopes were investigated （Anderson et al.， 2006）. 7.3.4 Other AssaysDue to biotechnological applications in immunology， several new approaches havebeen developed for T－cell mapping. T－cell epitope mapping using transgenic miceexpressing HLA is a good example of such application. In this assay， the draininglymph nodes of immunized HLA transgenic mice provide a more abundant sourceof allergen－specific CD4+ T－cell to map T－cell epitopes， than the PBMCs of atopicpatients （Malherbe， 2009）. Other novel techniques involve （1） T－ceU mapping bycytokine gene expressing （Provenzano and Spagnoli， 2009）， and （2） T－cellmapping by TAD （antigen and epitope discovery）， which is on the basis of takingthe advantage of paramagnetic beads to augment an antigen presentation（Valentino and Frelinger， 2009）. Although these new methods have not been foundin food allergen epitope mapping yet， their potential for applications are promising.

编辑推荐

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