Epitope Mapping: A Practical Approach (Practical Approach Series)

From Frank C Hay Olwyn M R Westwood
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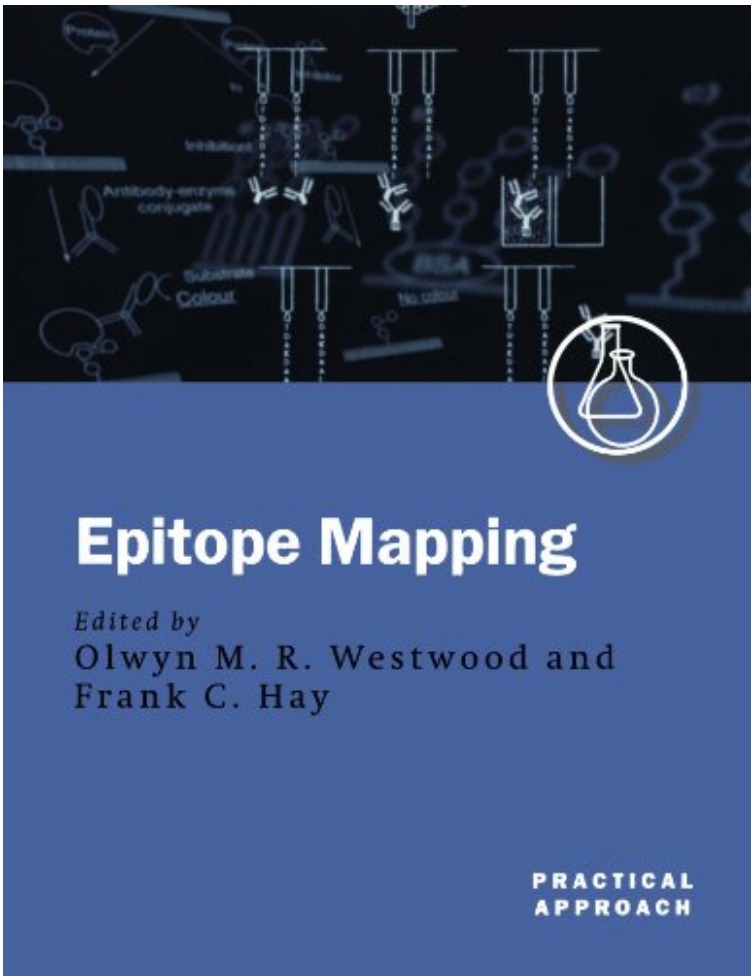

#4964382 in Books Frank C Hay Olwyn M R Westwood 2001-03-15Original language:EnglishPDF # 1 9.30 x .70 x 7.10l, 1.45 #File Name: 0199636524304 pagesEpitote Mapping A Practical Approach | File size: 47.Mb

From Frank C Hay Olwyn M R Westwood : Epitope Mapping: A Practical Approach (Practical Approach Series) before purchasing it in order to gage whether or not it would be worth my time, and all praised Epitope Mapping: A Practical Approach (Practical Approach Series):

Epitope Mapping covers all the major methods for the identification and definition of epitopes. The Pepscan assay is used to define B cell epitopes and makes use of synthetic peptides but can only be used if the amino acid sequence is known. It can be adapted for the delineation of both helper T cells and cytotoxic T cells. The identification of

combined B and T cell epitopes can also be achieved using synthetic peptides. There are other methodologies for analysing for cytotoxic T cell epitopes such as the purification of antigens presented by MHC class I molecules and expression cloning. Site directed mutagenesis is also a powerful tool in epitope mapping and can be used to evaluate the role of single amino acids in immune complex formation. Protein footprinting makes use of monoclonal antibodies produced by hybridoma technology and relies on the fact that the epitope is protected from cleavage when bound as an antibody-antigen complex. It is only useful for small antigens. Other monoclonal antibody assays such as enzyme linked immunosorbent assay and haemaglutination and slot-blotting may also be used in epitope mapping. Random phage display libraries bring together the genetic and amino acid peptide sequence and can be screened with antibody and the resulting peptide DNA sequenced to confirm the amino acid sequence of a specific epitope. Investigation of carbohydrates can also be useful to epitope mapping as deglycosylation can lead to loss of antigenic activity. Epitopes are important to the pharmaceutical industry and wherever appropriate, pharmaceutical applications of the methods described are included. For each method there is a description of the technology, protocols, trouble-shooting, and advice on when to use the method. This book will therefore be invaluable to any researcher involved in epitope mapping.

"For researchers who need to define the regions of antigens that make contact with the antigen-binding site of antibodies or T- cell receptors, specialists explain the epitope mapping technique, which can also be adapted to identify regions on other ligands in their interactions with receptors. They assume no previous exposure to the approach, and though expect readers to have some familiarity with immunological techniques in general, are careful to point to the basic literature."--SciTech Book NewsAbout the AuthorOlwyn Westwood is at Roehampton Institute, London. Frank Hay is at St George's Hospital Medical School, London.