

HLA Class II Peptide Mimics

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Summary:

The present invention provides peptide mimics for HLA class II antigens. The peptide mimics were identified by panning phage display peptide libraries with anti-HLA class II monoclonal antibodies. The peptide mimics inhibit the binding of an anti-HLA class II antigen antibody to HLA class II antigen positive cells and also elicit antibodies which can bind to HLA class II antigen positive cells. The identified peptide mimics can be used as immunogens for therapy of diseases related to cells expressing the HLA class II antigen, such as Non-Hodgkins Lymphoma.

Detail:

The present invention provides compositions in the form of peptide mimics of the HLA class II antigen and a method for producing same. This invention also provides a method of using the peptides to elicit an immune response against HLA class II antigen that is not normally immunogenic in hosts with HLA class II antigen expression. Still other embodiments include preparing a composition for use in the generation of an immune response and in the treatment of cells bearing HLA class II antigen. The composition comprises the peptide mimics disclosed herein. In another aspect, the present invention provides a method for eliciting an immune response in patients with NHL. The method comprises administering a composition effective in stimulating a specific immunological response against the HLA class II antigen. These composition(s) comprise a peptide that shares immunological characteristics of HLA class II antigen. While a detectable immunological response is likely to be beneficial, efficacy can also be deduced by an improvement in symptoms or control of the disease. Accordingly, in one aspect, the invention provides methods for identifying peptide mimics. The method comprises the steps of screening phage display peptide libraries with antibodies to HLA class II antigen. The identified peptides are then tested for their ability to elicit an immune response to HLA class II antigen and for reactivity of the elicited antibodies against HLA class II antigen bearing cells.