CYREX Laboratories

CLINICAL SPECIFICATIONS

BETA-GLUCAN

Antigen Made From:
Beta-glucan (β-glucan) was purchased from an antigen supplier

Associated With:
Beta-glucan immune reactivity

Known Cross-Reactions: Ash and Birch pollen, Tomato, Potato, Bell-pepper, Banana, Latex[1]

Clinical Significance:

Beta-glucans are proteins produced by fungi, yeasts, grains and seaweed. They are the constituents of the cell wall of certain pathogenic bacteria (*Pneumocystis carinii*, *Cryptococcus neoformans*) and fungi (*Aspergillus fumigatus*, *Histoplasma capsulatum*, *Candida albicans*, *Saccharomyces cerevisiae*). Beta-glucans are used as food additives in products such as salad dressings, frozen desserts, sour cream, and cheese spreads. They are also used in the nutraceutical and cosmetic industries. Beta-glucans are potent antigens and elevated levels are found in patients with systemic lupus erythematosus and rheumatoid arthritis.[2] Studies on food immune reactivities predominantly use raw food antigens. However, some researchers have noted that heating or combining food proteins can change their antigenicity.[3-5]

This array tests for IgG and IgA food immune reactivity.[6,7] Equivocal or out-of-range results indicate antibody reactivity to the tested food antigen. We tested 288 blood donor sera against beta-glucan extract antigens at optimal dilution, 10.4% of these donors were IgG and IgA reactive.

Due to cross-reactivity, possible connections between food antigens and human autoimmunity has been previously suggested because proteins in nature can have a similarity in sequence and structure to certain human tissues.[8-11]

Data suggests that eliminating foods identified using IgG antibody food testing can play a role in improvement of symptoms.[12] Because certain food components can lead to gut flora changes and gut permeability, eliminating specified food antigens should result in the reduction of antigenic stimuli and the improvement of symptoms.[12,13]

The results of this food array may be used to develop and implement an immune targeted dietary plan, which includes the avoidance of triggering and known cross-reactive foods. Furthermore, when followed over time, avoidance/prevention treatment plans tailored and supervised by the ordering healthcare professional, may help: (a) repair the gut barrier; and (b) re-establish oral tolerance to the offending food.[12,13]

References:

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