CYREX Laboratories

CLINICAL SPECIFICATIONS

SOYBEAN OLEOSIN + AQUAPORIN

Antigen Made From:

Soybean Oleosin and Soybean Aquaporin were purchased from an antigen supplier

Associated With:

Soybean Oil immune reactivity
Aquaporin immune reactivity

Known Cross-Reactions: Corn, Spinach, Tomato;[1] Insulin[14]

Clinical Significance:

Soybean oleosin is a plant protein found in soy. Seed plants with high oil content contain oleosin, a structural protein found in the monolayer of oilbodies.[2,3] Aquaporins are found in all cells and help move water through the cells in an organized manner. Aquaporin 4 (AQR-4), a water channel protein in the CNS and is expressed in astrocytes, particularly in the astrocyte foot processes at the blood brain barrier. Some environmental proteins such as spinach, soy, corn and tomato contain aquaporin that have similarity to the brain AQR-4. Generation of antibodies against AQR-4 in general may contribute to the development of immunity and/or progression of multiple sclerosis.[1] 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.[4-6]

This array tests for IgG and IgA food immune reactivity.[7,8] Equivocal or out-of-range results indicate antibody reactivity to the tested food antigen. We tested 288 blood donor sera against soybean oleosin and aquaporin 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.[1,9-11]

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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