CYREX Laboratories

## CLINICAL SPECIFICATIONS

# PARVALBUMIN

### Antigen Made From:

Parvalbumin purchased from an antigen supplier

### Associated With:

Parvalbumin immune reactivity
Fish/Seafood immune reactivity

**Known Cross-Reactions:** Anti-*B. burgdorferi* antibodies,[1] Many different types of fish[2-5]

### Clinical Significance:

Parvalbumin is a calcium-binding muscle protein that is present in all vertebrates. Parvalbumin has been identified as an allergen causing fish and seafood reactivity.[2-4] Fish-specific IgG antiparvalbumin antibodies displayed varying cross-reactivity among fish species.[5] In humans Parvalbumin can function as a cytosolic plasma calcium buffer, which protects cells from cytotoxic calcium overload.[5] 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.[7-9]

This array tests for IgG and IgA food immune reactivity.[10,11] Equivocal or out-of-range results indicate antibody reactivity to the tested food antigen. We tested 288 blood donor sera against parvalbumin 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.[12-15]

Data suggests that eliminating foods identified using IgG antibody food testing can play a role in improvement of symptoms.[16] 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.[16,17]

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.[16,17]

### References:


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