WHY IMUPRO?

ImuPro
Right Food. Better Health.

GOLD STANDARD OF IgG TESTING FOR DELAYED FOOD ALLERGIES

- The German manufacturer R-Biopharm AG is leader in Clinical diagnostics and Food & feed analysis
- More than 15 years of experience in IgG testing
- R-Biopharm AG is ISO certified (ISO 9001 and ISO 13485)
- Kits are CE marked
- Standard curve calibrated against the international reference preparation “1st WHO IRP 67/86 for human IgG”
- Yearly interlaboratory tests
- Excellent reproducibility of the test results
- Standardized production of allergens
- Close cooperation with international scientific experts from nine countries

CONVINCING CONCEPT FOR SATISFIED PATIENTS AND MEDICAL SUCCESS

- Improved concept developed on the basis of hundreds of thousands of patients’ cases and doctors’ experiences (3 phases: elimination, provocation, rotation)
- Helps the patient to find his personal trigger foods
- Patient documents are highly personalized
- The ImuPro concept comprises the key to avoid malnutrition: rotation of all tolerated foods
  - guaranteed varied diet supplying all necessary micro-nutriments and avoiding monotony
  - helps to avoid unintended nutritional mistakes (the guidelines point out in detail which products might be hidden in which processed foods)
  - helps to avoid the appearance of IgG to newly introduced food

SOPHISTICATED DOCUMENTS FOR THE PATIENT TO FACILITATE THE THERAPIST’S DAILY WORK!

- Detailed report
- Personal nutritional guidelines
- Individualized recipes (ImuPro Complete)

WHY CHOOSE IMUPRO?

IT WORKS • IT´S ACCURATE • IT´S INDIVIDUAL

Your building blocks for better health

WHY IgG INSTEAD OF IgA OR IgG4?

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Some laboratories and manufacturers use IgA to detect a delayed food allergy. Does this make sense?
Which antibody is best to detect a delayed food allergy?

OVERVIEW OF THE FUNCTIONS OF IgA, IgG4 AND IgG

IgA

- Principal isotype in secretions (esp. mucus epithelium of the intestinal and respiratory tracts)
- Neutralizing antibody against bacteria and toxins “first line of defense” with short half-life time (~6 days)
- Weak activator of complement and opsonisation – bound antigens are removed by macrophages with little to no inflammation
- Operates mainly on epithelial surfaces where complement and phagocytes are normally not present
- Is believed to act as a „discrete housekeeper“, in which foreign antigens are bound by IgA into complexes and removed by the macrophages, but with little or no resultant inflammation
- Less specific antigen binding site than IgG, e.g. higher cross reactivity and more false positives

IgG4

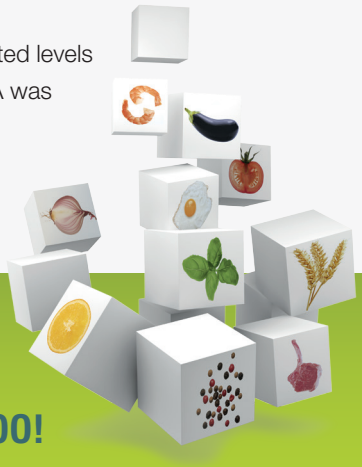
- Antibody involved in the desensotisation of type I allergies (IgE)
- The guideline of the EAACI (European Academy of Allergy and Immunology) states that testing for IgG4 is not recommended for the detection of delayed food allergies (https://www.ncbi.nlm.nih.gov/pubmed/18489614).
- Biochemically difficult to measure due to very low IgG4 concentrations and specificity of detection antibodies against IgG4
- Indicates tolerance not hypersensitivity
- Is not able to induce inflammation
- Is an anti-inflammatory antibody triggered by IL-10 (an anti-inflammatory cytokine)

IgG

- Principal isotype in the blood and extracellular fluid, where accessory cells and molecules are available
- Efficiently opsonises pathogens for engulfment by phagocytes and activates the complement system
- Persistent antibody with a half-life time of 20 days
- Induces inflammation

Vojdani* found a parallel in development of IgG and IgA antibodies to food, although less elevated levels for IgA and in some cases no IgA response could be seen. In none of the cases presented, IgA was positive alone; thus there seems to be no necessity to test for IgA alone.

* Detection of IgE, IgG, IgA and IgM antibodies against raw and processed food antigens.
Aristo Vojdani Nutrition & Metabolism 2009, 6:22



WHY CHOOSE IMUPRO?

- **THERE IS NO ADDITIONAL BENEFIT IN MEASURING IgA TOO!**
- **MEASURING IgG4 IS NOT A RELEVANT MARKER FOR DELAYED FOOD ALLERGIES!**
- **IgG IS THE RELEVANT PARAMETER FOR IDENTIFYING POTENTIAL DELAYED FOOD ALLERGIES IN THE HUMAN BLOOD!**

IMUPRO AND COMPETITORS

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Why ImuPro is the gold standard of IgG testing for delayed food allergies

TECHNICAL INFORMATION

ImuPro

- ELISA (Enzyme-linked immunosorbent assay) as a commonly accepted, accurate lab detection method
- Reliable and reproducible test results due to standardized procedures and simple pre analytical procedures. Robust sample matrix. No cell based assays, which might be subject to difficult pre-analytical procedures
- Extensive technical validation (related to CLSI guidelines) of the single parameters (foods)
- Detection of the relevant biological marker (IgG)
- Standardized calibration curve according to 1st WHO IRP 67/86 for human IgG
- Calibration curve on each plate to avoid plate-to-plate variations
- Highly standardized and certified allergen production
- Pool test of food antigens avoided, to ensure most reliable information for each food stuff
- Quality control through annual Inter laboratory comparisons

Competitors:

- Various detection methods. Some are not generally accepted such as e.g. Bioresonance Therapy or Hair Testing
- Some competitors use complex and potentially less reliable test principles, such as cell based assays.
- To our knowledge, no or very basic technical validation data
- Some competitors claim to measure IgG4 or IgA
- Calibration curve according to 1st WHO IRP 67/86 for human IgG : Unclear / not standardized
- Calibration curve: several competitors either use only one curve or only use a one point calibration.
- Standardization of allergen production: No / not known
- Competitors often use pool tests to maximize the number of tested foods
- Interlaboratory tests: To our knowledge, the competitors do not conduct such tests

CONCEPT AND PATIENT CARE

ImuPro

- Comprehensive post-test guidance for patients
- Provocation challenge test as integrational part of the ImuPro concept
- Provocation enables the accurate identification of actual trigger foods
- Stabilization phase helps the patients to permanently improve their condition
- Several clinical trials conducted with ImuPro
- Comprehensive scientific support and advice

Competitors:

- No defined provocation concept
- No provocation challenge test
- No definite identification of trigger foods
- Stabilisation phase is not part of their concepts
- Very few publications
- If support at all, then very brief