# Is it necessary to test IgA along with IgG? - Arguments for discussion

*By Dr. Camille Lieners*

**Some providers of IgG tests offer IgA antibody testing in addition to IgG, in order to take a more comprehensive look at the immune response to food. This might seem to be of additional value to the customer. But one has to consider some basic aspects to evaluate if this is true.**

1. IgA is a first line antibody, which is produced in the early stage of an immune reaction. It has a very short half-life time of approx. five days (Nature Reviews Drug Discovery 2, 52-62 January 2003; http://www.nature.com/nrd/journal/v2/n1/box/nrd984_BX1.html) and disappears when the second line antibody (IgG) is produced which is a persistent antibody. This means that if a patient doesn't eat a food to which he is reacting regularly, it may be that IgA antibodies are not detectable after a few days or weeks. Only IgG remain positive. The data published by Vojdani (Nutrition and Metabolism 2009, 6:22) indicate a kind of parallelism 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. There was no additional benefit in measuring IgA compared to IgG.

2. Additionally the incapacity to produce IgA is relatively common. Studies have indicated that as many as 1:223 Caucasian people have Selective IgA Deficiency. (Physiology of IgA and IgA deficiency. C.Cunningham-Rundles Journal of Clinical Immunology, Vol. 21, No5, 2001 http://link.springer.com/article/10.1023/A:1012241117984#page-1) Naturally, in these patients, it makes no sense to test for IgA against food.

3. IgA is considered to be a more specific marker for mucosal immune reactions and is supposed to be likely more positive in intestinal affections than IgG. IgG is the principal isotype in the blood and extracellular fluid, whereas IgA is the principal isotype in secretions, the most important being those of the mucus epithelium of the intestinal and respiratory tracts. Whereas IgG efficiently opsonizes pathogens for engulfment by phagocytes and activates the complement system, IgA is a less potent opsonin and a weak activator of complement. It activates the alternative pathway, while IgG activates the classical pathway. This distinction is not surprising, as IgG operates mainly in the body tissues, where accessory cells and molecules are available, whereas IgA operates mainly on epithelial surfaces where complement and phagocytes are not normally present; therefore it functions chiefly as a neutralizing antibody. The principal sites of IgA synthesis and secretion are the gut, the respiratory epithelium, the lactating breast and various other exocrine glands such as the salivary and tear glands. It is believed that the primary functional role of IgA antibodies is to protect epithelial surfaces from infectious agents, just as IgG antibodies protect the extracellular spaces of the internal tissues. IgA antibodies prevent the attachment of bacteria or toxins to epithelial cells and the absorption of foreign substances and provide the first line of defense against a wide variety of pathogens.(Immunobiology: The Immune System in Health and Disease 5th editionhttp://www.ncbi.nlm.nih.gov/books/NBK27162/)

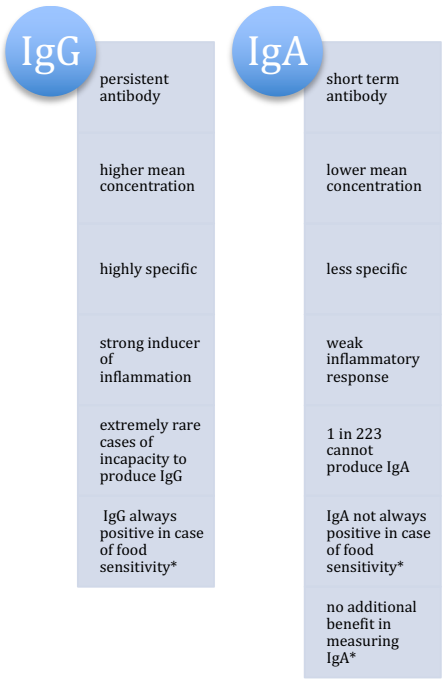
IgA is believed to act as a „discrete housekeeper“, in which foreign antigens are bound by IgA into complexes and removed by the phagocytic system, but with little or no resultant inflammation. (Physiology of IgA and IgA deficiency. C.Cunningham-Rundles Journal of Clinical Immunology, Vol. 21, No5, 2002 http://link.springer.com/article/10.1023/A:1012241117984#page-1)

US Biotek is one of the IgG test providers that use IgA and IgG as marker for food intolerance. They refer to a statement of Dr. Rahbek from Norway who claims to be more successful in using both IgA and IgG in several patients. What does “several” patients mean? It could also be that the IgG cut-off level for certain foods is not correctly established.

4. IgA antibodies are less specific and have a higher rate of cross-reactivity than IgG antibodies. Their aim is to capture and cleave foreign compounds as much as possible. Therefore they recognize compounds with lower ratio of homology. A possible consequence could be more false positive results.

5. IgA antibodies to food have been reported to be involved in some distinct pathology, such as IgA-mediated nephropathy.
They can form immune-complexes with food antigens and are predominantly deposited in the kidney in sensitized patients and lead to glomerulonephritis. Testing for IgA to food should be strictly limited to this pathology.

6. To our knowledge, no scientific paper has proven the advantage of testing IgA in addition to IgG.




Comparison of antibody properties *according to Vojdani Nutrition and Metabolism 2009, 6:22

**Conclusion:**

Although the additional testing of IgA may mimic a more comprehensive testing for food sensitivities, to our knowledge, no published data is available so far which proves an increase in the accuracy of food sensitivity testing. In the competitors' own referenced publications no additional benefit could be seen. The fact that some providers of IgG tests offer IgA is to be considered as pure marketing strategy without any scientific proof.