

SECRETORY IgA (saliva)

Secretory IgA (sIgA) is found in high concentrations in the secretions of the gastrointestinal, genitourinary and respiratory mucosal linings. The most recognised function of sIgA includes its role in 'immune exclusion' in which it prevents viruses, bacteria and other antigens adhering to and penetrating epithelial mucosa. Secretory IgA may also inhibit inflammatory processes that damage the mucosa, and preliminary evidence suggests that it may play a role in inducing an antigen specific immune response by a non-inflammatory mechanism. A sIgA deficiency may lower resistance to infection and is associated with coeliac disease, chronic obstructive pulmonary disease and atopy.

Secretory IgA

The gastrointestinal, genitourinary and respiratory mucosal linings represent extensive surfaces for potential assault by microbes. Secretory IgA (sIgA) is found in high concentrations in the secretions that bathe these mucosal cells, where it acts as the chief antibody in the first line of immune defence. Secretory IgA is made up of polymeric IgA and the secretory component; hence its name secretory IgA. It is a very stable molecule which is resistant to degradation and therefore functions well in the harsh environment of the gastrointestinal tract. Secretory IgA is thought of predominantly as a first line of defence as part of the innate immune response, whereas serum IgA is part of the adaptive immune response. In comparison to serum IgA, the functions of sIgA are not dependent on the specificity of the IgA molecule.

SYMPTOMS AND CONDITIONS ASSOCIATED WITH DISTURBED sIgA LEVELS

Autoimmune disorders	Food sensitivities
Asthma	IgA deficiency
Atopy	Neoplasia
Chronic obstructive pulmonary disease	Recurrent infections
Celiac disease	Viral infections e.g. HPV, HIV
Downs Syndrome	

Secretory IgA Contributes to the Body's Immune Defence by a Number of Mechanisms

1. **Immune exclusion on the luminal mucosa** - SIgA can prevent antigens, including viruses, bacteria and bacterial toxins and enzymes, adhering to and penetrating the luminal epithelial mucosa. SIgA complexes with the antigens, which facilitates their elimination by peristalsis or mucociliary movements. This is the most recognised function of SIgA.
2. **SIgA complexes with antigen in the stroma** - SIgA is also active at the stromal side of the epithelium. SIgA can complex with antigens present in the underlying tissue where these immune complexes are phagocytosed, absorbed into the vascular system, or transported across the epithelium into the lumen.
3. **SIgA may present antigens to the immune system** - There is preliminary evidence to suggest that SIgA can also stimulate an antigen specific immune response in a non-inflammatory manner. Results suggest the SIgA can complex with antigens and then transport them into Peyer's patch dendritic cells where the antigen can be associated with T helper cells. These T helper cells go on to signal an immune response including the production of antigen specific antibodies. This novel mechanism of inducing a specific immune response in a non-inflammatory context may be important in preserving local homeostasis of the gastrointestinal tract.
4. **SIgA prevents damage of the mucosal lining** - SIgA may protect the mucosa by inhibiting inflammatory processes that would normally damage the epithelia. It suppresses complement system mediators, complement-dependent phagocytosis and pro-inflammatory mediators, such as cytokines and arachidonic acid metabolites.

SECRETORY IgA (saliva) [Test code: 3007]

❖ Secretory IgA

Other Secretory IgA tests available

- **Adrenocortex Stress Profile – Extensive (saliva):** DHEAs, Cortisol x 4, Secretory IgA

How to order a test kit:

To order a test kit simply request the test name or test code on a NutriPATH request form and have the patient phone NutriPATH Customer Service on 1300 688 522.



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