

Secretory IgA (sIgA)

sample type: **SALIVA**

Immunoglobulin A (IgA) is an antibody playing a critical role in mucosal immunity and is produced in greater quantities than all other types of antibody combined. In its secretory form, sIgA is the main immunoglobulin found in mucous secretions and provides protection against potentially pathogenic microbes, due to its ability to resist degradation by enzymes and survive in harsh environments such as GI and respiratory tracts. sIgA is the first line of defence against bacteria, food residues, yeast, parasites and viruses, and imbalances may provide the link between gut imbalances and systemic illness. Deficiency of sIgA is a common finding with, Lifestyle, stress and nutritional factors all able to influence levels.

What is Secretory IgA

Despite the importance to an individual of mucosal immunity, it is one of the least well-understood areas of human immunology. IgA accounts for approx 15 – 20 % of serum immunoglobulin, but is the most abundant immunoglobulin in secretions: saliva, tears, colostrum and bronchial, intestinal, and G.I secretions. Serum IgA is largely monomeric but in secretions it exists as secretory IgA a dimer of two IgA (IgA1 or IgA2) bound by a J chain and attached to a molecule known as the secretory piece. This secretory piece is produced by the mucosa and facilitates the transport of sIgA into external secretions. This represents the first line of defence against potential pathogens, toxins and food allergens.

Clinical applications of secretory IgA antibody testing

- Production is stimulated by bacteria & viruses, which are removed by sIgA and phagocytosis
- Patients deficient in sIgA are susceptible to pathogens in the G.I tract
- There is a particularly high prevalence of IgA deficiency in coeliacs (5%)
- Deficiencies may be associated with asthma, autoimmune disease, candidiasis, coeliac disease and food allergies
- Ulcerative colitis and Crohn's patients all have low sIgA. There is some evidence that increasing the levels may help disease
- High levels are often found in patients with chronic infection (CMV, EBV and HIV)
- Lifestyle and nutritional factors influence levels
- Choline, EFA's, glutathione, glycine, phosphatidylcholine, Vitamin C & zinc are all needed for efficient production
- Chronic dermatological conditions

Any irritation to the gut lining can contribute to increased permeability. Irritation results from inflammation, imbalanced intestinal organisms, intolerances and allergies, maldigestion and exposure to NSAIDs. Leaky gut can lead to increased burden on the hepatic detoxification systems, which can deplete important nutrient co-factors and increase toxic reactions. Chronically impaired gut immune function leads to an increase in susceptibility to toxic substances and bacterial translocation.

The comprehensive adrenal stress profile also measures secretory IgA as chronic stress can have a dramatic effect on secretory IgA production.

• Testing Options:

- Individual Profiles -

Secretory IgA

- Combination Profiles -

Comprehensive Adrenal Stress Profile

• Specimen Requirements:

- Comprehensive ASP -

4 x 2 ml saliva

- Secretory IgA -

1 x 2 ml saliva

• Before Taking this Test:

- Avoid immuno-suppressive medications for at least one week
- Chemotherapy may interfere with test results
- See instructions inside test kit for details

Accession No:



Secretary IgA (Saliva)

Patient Details

Ms Sample Report
Parkgate House
356 West Barnes Lane
New Malden
Surrey
KT3 6NB

Practitioner Details

Genova Diagnostics (Europe)
Parkgate House
356 West Barnes Lane
New Malden
Surrey
KT3 6NB

Client ID No: IWX500220
Accession No:
Patients DOB: 02/03/1975
Sample Date: 02/06/2008
Date Of Report: 02/06/2008

This test reveals important clinical information about:

- Anti-inflammatory drug usage
- Antibiotics
- Intestinal infections
- Intestinal bacteria and yeasts
- Aging
- High alcohol intake
- Maldigestion and Malabsorption
- Gastroenteritis
- Chemotherapy
- Food poisoning

Secretary IgA (SIgA)				
Analyte	Result	Units	Normal Range	Optimal Range
Results & Ranges				
Secretary IgA	52.3 L	µg/mL	118 - 641	130 - 471
Analyte		Reference Range (µg/mL)		
SIgA Mean	52.3	118 - 641		

Commentary

Secretary immunoglobulin A (SIgA) is the dominant immunoglobulin in external secretions that bathe the mucosal surfaces (respiratory and intestines) and is a vital component of the immune systems "first-line of defence" against pathogenic microorganisms, viruses and bacteria. The daily production is weight and age dependent with the maximum production level being reached at the age of 7-10 which then declines with age. (60+)

SIgA production is both beneficially and adversely affected by a number of diverse factors including stress, emotions such as frustration and anger, nutrients, commensals, pathogens and inflammation.

Low Levels of SIgA

SIgA key function is to bind to invading micro organisms and toxins and entrap them in the mucus layer or within the epithelial cells, so inhibiting microbial motility, agglutinating the organisms and neutralising their exotoxins and then assist in their harmless elimination from the body in the faecal flow. SIgA also 'tags' food as acceptable, so low SIgA leads to increased sensitivity to foods.

Several studies link stress and emotionality with levels of SIgA. Production is adversely affected by stress, which is mediated by cortisol levels. This could result in inadequate production of SIgA in response to a mucosal infection. Reduced SIgA levels may be associated with sub optimal adrenal output, in which case an adrenal stress index test would be recommended.

High levels of SIgA

Elevated levels in saliva are associated with an immune response to stimulation by infections and inflammatory reactions. High levels of SIgA production may indicate an infection of the digestive system, in which case a Comprehensive Stool Analysis with parasites would be recommended.

Reported By: NRA

For test kits, clinical support, or more information contact:

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More detailed publications with references are also available: www.GDXuk.net