



PRODUCT FACTS

SOMA Product Code
SOMA LFD -A

Test Kit Contents

100 OFC (Swab & Buffer)
100 sIgA LFDs

Applications

For the analysis of saliva samples for the quantitative determination of secretory IgA when read in the SOMA LFD Reader. For use in Sport, Exercise, Corporate, Healthcare and Research.

Incubation Time

Two drops of saliva / buffer mix added to LFD, which is scanned 10 minutes later (scan takes approximately 4 seconds).

Sample Volume

Two drops of saliva / buffer mix from OFC (~100 µl).

Shelf-Life

Typically 12 months

Storage

4°C to 37°C

Specificity

Specific to human secretory immunoglobulin A

L.O.D.

7.5 µg/ml

L.O.Q.

12.13 µg/ml

Calibration Range

25-800 µg/ml

Cross-Reactivity

With human IgG < 0.1% at 500 µg/ml.

Simple sIgA measurement solutions

SOMA sIgA Lateral Flow Device (LFD)

The SOMA sIgA LFD offers a quick and easy non-invasive method of assessment that requires no laboratory equipment and is remarkably cost-effective, especially when measuring small numbers of samples.

The component parts required for a test are: an SOMA LFD Reader; an SOMA Oral Fluid Collector (OFC) swab; an SOMA OFC Buffer and an SOMA LFD cassette, in this case sIgA.

Secretory IgA is a specific antibody known to be the first line of defence on the mucosal surfaces against upper respiratory tract infection (URTI) and gastro-intestinal infection (GI). Although the immune system is multi-faceted and complex in nature, measuring sIgA gives good insight into the responses of the immune system.

The test is very quick to perform and a fully quantitative result can be gained within 12-13 minutes of giving the subject an SOMA OFC swab. If testing a batch of samples, 20 tests can be measured in 20 minutes making it far quicker than any laboratory test. The process is very simple and user-friendly.

Application to Sport

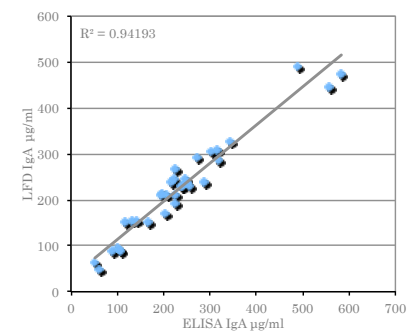
Although one-off bouts of exercise at a moderate intensity have little harmful effect upon the immune system, it is well documented that when athlete training loads rise and become more dense in nature, the immune system can become suppressed and this is often reflected by a drop in sIgA levels from an athletes baseline norm (Walsh et al 2011). Such baselines are important and are usually established with about 6 measurements in each individual being tested. The test is used for routine monitoring of athletes and players by many professional sports teams and National Governing Bodies throughout the world.

Monitoring Stress

sIgA has been used as a biomarker of stress, with research showing drops in sIgA in response to chronic stress, yet spikes in response to acute stress when compared with previously established individual baselines.

Comparison of SOMA sIgA LFD with ELISA from Dunbar & Jehanli (2011)

Agreement with Laboratory ELISA



The SOMA sIgA LFD correlates well with values measured on the laboratory ELISA and when run in duplicates usually has within assay cvs of below 10%. Thus the test is accurate and reliable and easily performed in wide range of environments, away from the lab. Each batch of strips manufactured use their own specific calibration curve, uploaded to the SOMA LFD Reader.

References

Dunbar J & Jehanli A (2011) Investigating the use of a point of care sIgA test in English Premier League Soccer players. *Proceedings 10th Symposium Intl Soc Ex Immunol.*
Nomura S (2012) Salivary Hormones, Immunes and Other Secretory Substances as Possible Stress Biomarker, *Biomarker*, Prof. Tapan Khan (Ed.) p 247-270
Walsh et al, (2011) Position Statement Part One: immune function and exercise, *Exerc. Immun. Rev.* 17: 6-63.

Independent Validation Studies:

Coad *et al.* (2015) Validity and Reliability of a novel immunoassay for Individual Profiling in Applied Sports Science. *Research in Sports Med.* 23(2): 1-11
MacDonald L *et al.* (2016) Reliability of salivary cortisol and Immunoglobulin A measurements from the IPRO before and after sprint cycling exercise. *J. Sports Med & Phys Fitness.* November 2016