



## PRODUCT FACTS

### SOMA Product Code

SOMA LFD - sIgA/Cort

### Test Kit Contents

100 OFC (Swab & Buffer)  
100 Dual analyte LFDs

For measurement of sIgA  
and salivary cortisol.

### Applications

For the analysis of saliva samples for the quantitative determination of sIgA & cortisol when read in the SOMA LFD Reader or Cube Reader. For use in Sport, Exercise, Corporate, Healthcare and Research.

### Incubation Time

15 minutes from the addition of sample.

### Sample Volume

Two drops of saliva / buffer mix from dilution buffer.

### Shelf-Life

Typically 12 months

### Storage

4°C to 37°C

### Specificity

Specific to secretory IgA and salivary cortisol.

### L.O.D.

sIgA 18.1 µg/mL Cortisol 0.17nM

### L.O.Q.

sIgA 24.3 µg/mL Cortisol 0.58nM

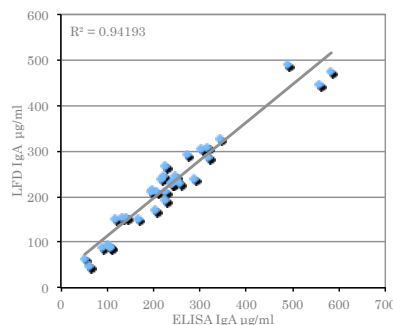
### Calibration Range

sIgA:  
25 - 800 µg/mL  
Cortisol:  
1.25 - 40 nM

The SOMA Dual Analyte LFDs contains two test lines for separate analytes that can be measured from the same sample in one scan. This reduces time in gathering data when testing for more than one analyte in a session.

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

*Comparison of SOMA sIgA LFD with ELISA from Dunbar & Jehanli (2011)  $r=0.97$*



Both sIgA and cortisol can be used to measure acute and chronic responses to stress. The test is very quick to perform as it uses two drops of saliva buffer mix from the SOMA OFC which are placed on the LFD, with a 15 minute incubation time. Two tests lines are created, along with a control line and a quantitative value for both markers is displayed on the reader after the 4 second scanning period.

### Monitoring Stress

Research shows that there are two distinct systems involved in the stress response of humans and other animals. The response and activity of both systems can be measured via various biomarkers in saliva. The classic method of characterising a stress response is to measure cortisol levels, which rise due to a series of changes in the hypothalamic-pituitary-adrenal (HPA) axis. However, this system can be relatively slow in responding

to stress; whilst changes in the sIgA response, a marker of the sympathetic nervous system (SNS) activity, is somewhat quicker. It is also well known that chronic stress, with elevated cortisol levels, can lead to immune suppression and reduced sIgA values. With repeated measurements within a day, the diurnal pattern of both markers can be established quickly and conveniently.

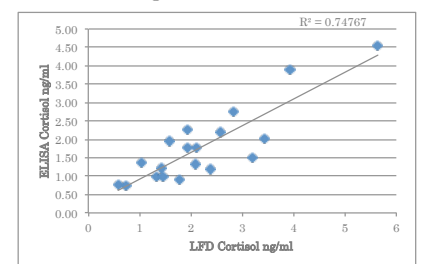
### Application to Sport

Intense training and competition are known to be responsible for eliciting a catabolic state, which can be assessed by routine monitoring of cortisol levels. Similarly intense training and competition are also known to cause immune suppression and reduced sIgA levels in athletes. The ability to measure both responses in one quick and easy test is of great use to coaches and scientists attempting to establish "readiness to train" indices, to ensure optimal benefit from subsequent training.

### Agreement with Laboratory ELISA

The SOMA sIgA & Cortisol 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 tests are accurate and reliable and easily performed in a 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 or Cube Reader.

*Comparison of Cortisol LFD with ELISA (n=18) at a Premier League Football club,  $R=0.87$*



### Reference

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.*