SOMA Amylase / sIgA Dual Analyte LFD

PRODUCT FACTS

SOMA Product Code

SOMA LFD - sAA/sIgA

Test Kit Contents

25 or100 OFC (Swab & 10+1 Buffer)
25 or 100 Dual analyte LFDs

For measurement of salivary alpha-amylase and sIgA.

Applications

For the analysis of saliva samples for the quantitative determination of sAA &sIgA when read in the SOMA LFD 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 salivary alpha-amylase and secretory IgA.

Limit of Detection

sAA:

10 µg/mL

sIgA:

14.5 µg/mL

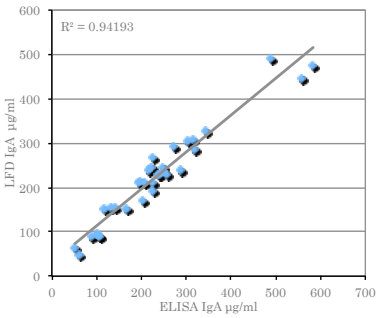
Calibration Range

sAA:
25 - 800 µg/mL
sIgA:
25 - 800 µg/mL

The SOMA Dual Analyte LFDs contain 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 or Cube Reader; a SOMA Oral Fluid Collector (OFC) swab and Buffer and a SOMA Dual Analyte LFD cassette, in this case sAA & sIgA.

Comparison of SOMA sIgA on Dual sAA/ IgA LFD with ELISA



Both sAA and sIgA can be used to measure acute responses to stress., as well as both being key antimicrobial proteins and thus immune markers 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 Cube 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 sAA and sIgA response, markers of the sympathetic nervous system (SNS) activity, are somewhat quicker.

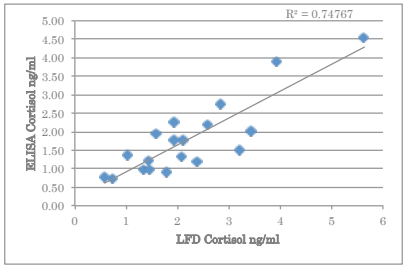
Application to Sport

Intense training and competition are known to be responsible for eliciting a catabolic state and elevated stress levels. Similarly intense training and competition are also known to cause immune suppression and reduced sIgA levels in athletes. The ability to measure both immune 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 sAA & 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 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.

Comparison of Cortisol LFD with ELISA (n=18) at a Premier League Football club, R^2=0.75.



Reference

Dunbar J Hazell G & Jehanli A (2015) Investigating a dual sIgA and alpha amylase Point of Care test in the sporting environment. *Proceedings 12th Symposium Intl. Soc Ex Imunol. Vienna, Austria*