**BIOLOGICAL CONSIDERATIONS**

Secretory Immunoglobulin A (SIgA) is a subclass of Immunoglobulin A (IgA), an antibody that plays a critical role in mucosal immunity. SIgA is the main immunoglobulin found in mucous secretions from tear glands, salivary glands, mammary glands, the respiratory system, the genito-urinary tract, and the gastrointestinal tract and is part of a complex immune defense network along with other immunoglobulins such as IgG and IgM (which can also be measured in saliva). SIgA is not derived from blood. It is produced by B-lymphocytes adjacent to the mucosal cells, then transported through the cell interiors, and released into the secretions from the cells. Differences in SIgA levels have been observed in different saliva glands from humans, with the highest levels found in the minor saliva glands. SIgA exhibits a diurnal rhythm, decreasing from the highest levels in the morning to the lowest in the evening. SIgA levels in saliva also vary in response to physical and psychological stress through interactions with the autonomic nervous system.

**SAMPLE TIMING AND DESIGN**

SIgA levels in saliva are affected by flow rates, with concentrations normally decreasing as flow rates increase. Measurement of flow rates is advisable in order to express SIgA secretion as a function of time.

**FREQUENTLY STUDIED WITH**

Cortisol, IgG, IgM, Cytokines

**TECHNICAL SUMMARY**

**Sample Collection Methods & Volumes**

<table>
<thead>
<tr>
<th>Sample Collection Methods &amp; Volumes</th>
<th>✔</th>
</tr>
</thead>
<tbody>
<tr>
<td>Passive Drool (Recommended)</td>
<td>✔</td>
</tr>
<tr>
<td>SalivaBio Swabs</td>
<td>✔</td>
</tr>
<tr>
<td>Optimum Collection Volume</td>
<td>50 µL*</td>
</tr>
</tbody>
</table>

*Add 300 µL to the total collection volume for all analytes of interest.

**EXAMPLE DATA**

Observed SIgA levels across samples (gray area represents stress tasks).

**KEY RESOURCES**