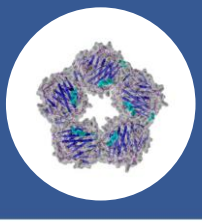
SALIVARY C-REACTIVE PROTEIN QUICK START GUIDE



BIOLOGICAL CONSIDERATIONS

C-Reactive Protein (CRP) functions mainly in innate immune defense. Levels increase in response to inflammation, infection, tissue damage, necrosis, malignancy, and allergic reactions. The majority of CRP originates from the liver, but CRP and IL-6 mRNAs have been detected in gingival tissue samples from periodontitis patients. Studies suggest salivary and serum CRP levels are more strongly associated than is true for other inflammatory markers. Small amounts of CRP enter whole saliva from the circulation as a component of the gingival crevicular fluid (GCF) or through salivary glands. Multiple studies reveal associations between salivary CRP and biobehavioral phenomenon of interest.

Biological Representation	Systemic inflammation
Prominent member of	Acute-phase inflammatory proteins

SAMPLE TIMING AND DESIGN

Levels of CRP in saliva show a modest circadian pattern with higher levels in the AM than PM. As for all inflammation-related markers in oral fluids, variation in salivary/GCF CRP levels is likely to reflect a combination of both systemic and local (oral) inflammation.

FREQUENTLY STUDIED WITH

Cortisol, IL-6, IL-1β, IL-8, SIgA, TNF-alpha, Uric Acid

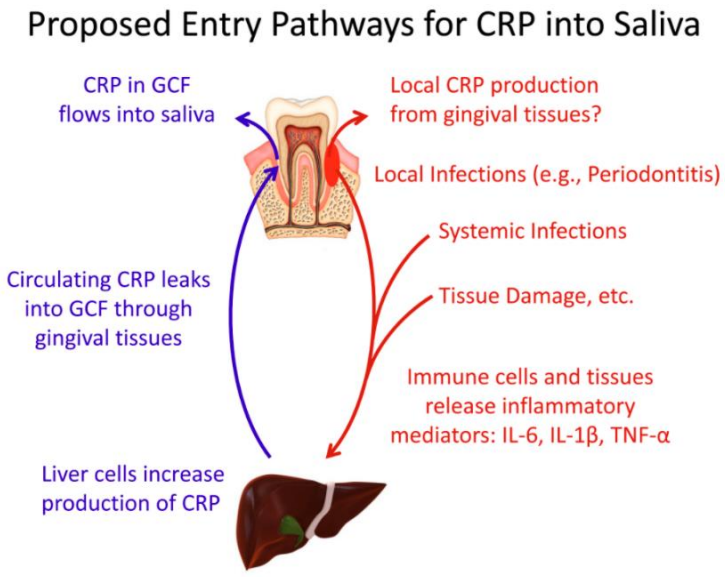
TECHNICAL SUMMARY

Sample Collection Methods & Volumes	
Passive Drool	✓
SalivaBio Swabs	-
Optimum Collection Volume	225 µL*

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

EXAMPLE DATA

Entry Pathways for CRP into Saliva



KEY RESOURCES

1. Granger, DA, Taylor, MK. (2020). Salivary Bioscience: Foundations of Interdisciplinary Saliva Research and Applications. Springer. https://springer.com/book/10.1007/978-3-030-35784-9.
2. Ebersole JL, Cappelli D. Acute-phase reactants in infections and inflammatory diseases. Periodontol 2000. 2000;23:19-49.
3. Lu Q, Jin L. Human gingiva is another site of C-reactive protein formation. J Clin Periodontol. 2010;37(9):789-96.
4. Out D, Hall RJ, Granger DA, Page GG, Woods SJ. Assessing salivary C-reactive protein: longitudinal associations with systemic inflammation and cardiovascular disease risk in women exposed to intimate partner violence. Brain, behavior, and immunity. 2012;26(4):543-51.
5. Izawa, S., Miki, K., Liu, X., & Ogawa, N. (2013). The diurnal patterns of salivary interleukin-6 and C-reactive protein in healthy young adults. Brain, behavior, and immunity, 27(1), 38–41.

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