Cortisol Saliva ELISA

Steroid Hormones

Competitive enzyme immunoassay for the quantitative determination of Cortisol in human saliva. Results are to be used as an aid in the assessment of Cushing's syndrome (CS) and other disorders of the hypothalamic pituitary adrenal axis.

Cortisol is a steroid hormone synthesised in the cortex of the adrenal gland. This glucocorticoid plays a role in the metabolism of carbohydrates, fat and protein, the maintenance of myocardial function and the adaptation to stress[1]. Approximately 90% of cortisol in plasma or serum is protein bound to cortisol-binding-globulin (CBG). Measurement of unbound cortisol found in saliva is an accurate method to assess the biologically active free plasma cortisol[2,3]. CBG concentrations decrease with certain liver and kidney diseases, resulting in decreased serum cortisol concentrations. The unbound fraction, as in saliva, is said to remain constant[4].

In healthy subjects, cortisol levels peak at 7–9 a.m., with levels falling for the rest of the day[5]. Patients with abnormal function of the adrenal gland lose normal circadian rhythm and have higher levels of cortisol at midnight[6].

Measuring late night salivary cortisol is an easy and non-invasive means of diagnosing diseases of cortisol imbalance such as Cushing's Syndrome. Salivary cortisol is most useful in the initial test when CS is suspected, and for periodic patient monitoring after pituitary surgery for CS[7,8].

Features and benefits

- Non-invasive test
- Standardised sample collection
- Measurement of free cortisol: diagnostic relevance compared to serum assay
- Wide range of application: sport medicine, paediatrics, occupational medicine, veterinary medicine, sleep disturbance
- Sensitive and reliable
- Ready to use reagents
- Excellent correlation with commercial methods

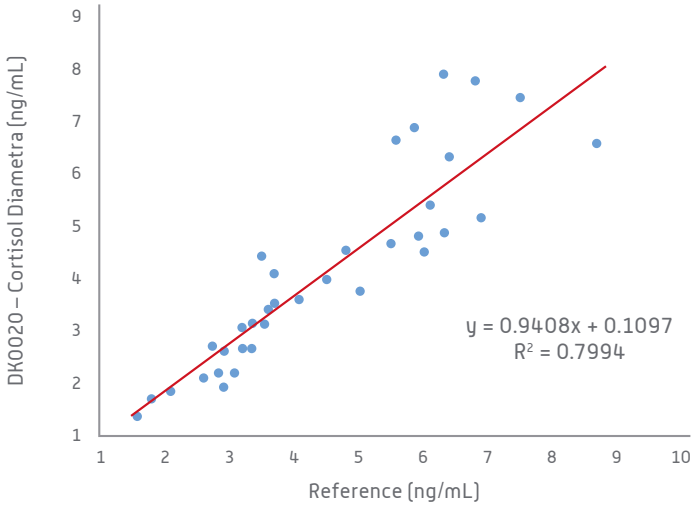
Specifications

Format	ELISA
Calibrators	Ready To Use – 7 vials – 1 mL each - 7 concentration levels
Controls	Ready To Use – 2 vials – 1 mL each
Assay Range	0.5-100 ng/mL
Sensitivity	0.12 ng/mL
Sample Volume	25 µL
Sample Type	Saliva

Method Comparison

Cortisol Saliva ELISA vs Reference Method

35 samples were assessed with both Cortisol Saliva ELISA and a reference method.



Ordering information

Product Name	Description	Code
Cortisol Saliva ELISA	96 Wells	DKO020

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Complementary Products

Product Name	Description	Code
DHEA-S Saliva ELISA	96 Wells	DKO024
IgA Saliva ELISA	96 wells	DKO078
Salivette (Sarsted – External supplier)	100 Pieces	51.1534.500

References

1. John J. Bray et al. Lecture notes on human physiology. Third Edition Published by Blackwell Science 1994.
2. David W., The Immunoassay Handbook. Third Edition. D.Wild (Ed.) Published by Elsevier Ltd. 2005.
3. Yaneva M., Mosnier-Pudar H., Dugue M-A., Grabar S., Fulla Y. and Bertagna X., 'Midnight salivary cortisol for the initial diagnosis of Cushing's and various causes'. J Clin Endocrinol Metab, 89(7), 2004, pp 3345-3351.
4. Aardal, E. and Holm, A-C., 'Cortisol in saliva – reference ranges and relation to cortisol in serum'. Eur J Clin Chem Clin Biochem, 33, 1995, 927-932.
5. Rossi GP., Seccia TM. and Pessina AC., 'Clinical use of laboratory tests for the identification of secondary forms of arterial hypertension'. Crit Rev Clin Sci, 44(1), 2007, pp 1-85.
6. Nieman LK., Biller BMK., Findling JW., Newell-Price J., Savage MO., Stewart PM., and Montori VM., 'The diagnosis of Cushing's: an endocrine society clinical practice guideline'. J Clin Endocrinol Metab, 93, 2008, pp 1526-1540.
7. Raff, H., 'Cushing's: diagnosis and surveillance using salivary cortisol'. Pituitary, 15, 2012, pp 64-70.
8. Raff, H., 'Update on late-night salivary cortisol for the diagnosis of Cushing's: methodological considerations'. Endocrine, 44, 2013, pp 346-349.