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Zuschläge

- Mindermengenzuschlag
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StressXpress®
Cortisol EIA Kit

Quantitative colorimetric detection of cortisol
Catalog No. SKT-201



Discovery through partnership | Excellence through quality

Overview

Product Name

Cortisol EIA Kit

Description

Quantitative colorimetric detection of cortisol

Species Reactivity

Species Independent

Platform

Microplate

Sample Types

Dried Fecal Samples, EDTA Plasma, Heparin Plasma, Saliva, Serum, Tissue Culture Media, Urine

Detection Method

Colorimetric Assay

Assay Type

Sandwich EIA (Enzyme Immunoassay)

Utility

EIA kit used to quantitatively measure cortisol present in samples.

Sensitivity

17.3 pg/ml

Assay Range

100 - 3200 pg/ml

Precision

Intra Assay Precision: Three human samples were diluted with Assay Buffer and run in replicates of 20 in an assay. The mean and precision of the calculated Cortisol concentrations were:

Sample 1- 1174.3 pg/mL, 6% CV

Sample 2- 475.9 pg/mL, 5.6% CV

Sample 3- 177.4 pg/mL, 14.7% CV Inter Assay Precision: Three human samples were diluted with Assay Buffer and run in duplicates in ten assays run over multiple days by four operators. The mean and precision of the calculated Cortisol concentrations were: Sample 1- 1188.1 pg/mL, 7.2% CV Sample 2- 508.7 pg/mL, 6.3% CV

Sample 3- 199.7 pg/mL, 10.9% CV

Incubation Time

90 Minutes

Number Of Samples

40 samples in duplicate

Other Resources

Kit Booklet, MSDS, Steroid Solid Extraction Protocol, Saliva Sample Handling Instructions

Properties

Storage Temperature

4°C

Shipping Temperature

Blue Ice

Product Type

EIA Kits

Assay Overview

The Cortisol EIA kit is designed to quantitatively measure cortisol present in dried fecal extracts, saliva, urine, serum, plasma and tissue culture media samples. This kit measures total cortisol in extracted samples and in serum and plasma and free cortisol in saliva and urine. A cortisol standard is provided to generate a standard curve for the assay and all samples should be read off the standard curve. Standards or diluted samples are pipetted into a clear microtiter plate coated with an antibody to capture mouse antibodies. A cortisol-peroxidase conjugate is added to the standards and samples in the wells. The binding reaction is initiated by the addition of a monoclonal antibody to cortisol to each well. After an 1 hour incubation the plate is washed and substrate is added. The substrate reacts with the bound cortisol-peroxidase conjugate. After a short incubation, the reaction is stopped and the intensity of the generated color is detected in a microtiter plate reader capable of measuring 450 nm wavelength. The concentration of the cortisol in the sample is calculated, after making suitable correction for the dilution of the sample, using software available with most plate readers.

Kit Components

Component No.

Item

Quantity / Size

SKC-201A

Clear Microtitre 96 well Plate

1 Plate

SKC-201B

Cortisol Standard

125 µl

SKC-201C

StressXpress® Cortisol Antibody

3 ml

SKC-201D

StressXpress® Cortisol Conjugate

3 ml

SKC-201E

Assay Buffer

28 ml

SKC-201F

Dissociation Reagent

1 ml

SKC-201G

Wash Buffer Concentrate

30 ml

SKC-201H

TMB Substrate

11 ml

SKC-201I

Stop Solution

5 ml

SKC-201J

Plate Sealer

1 Each

Cite This Product

Cortisol EIA Kit (StressMarq Biosciences Inc., Victoria BC CANADA, Catalog # SKT-201)

Biological Description

Alternative Names

(11 β)-11,17,21-trihydroxypregn-4-ene-3,20-dione EIA Kit

Research Areas

Cancer, Cell Signaling, Neuroscience, Oxidative Stress

Scientific Background

Cortisol, C21H30O5, (hydrocortisone, compound F) is the primary glucocorticoid produced and secreted by the adrenal cortex. It is often referred to as the "stress hormone" as it is involved in the response to stress and it affects blood pressure, blood sugar levels, and other actions of stress adaptation. Immunologically, cortisol functions as an important anti-inflammatory and plays a role in hypersensitivity, immunosuppression, and disease resistance (1). In the metabolic aspect, cortisol promotes gluconeogenesis, liver glycogen deposition, and the reduction of glucose utilization (2). Production of cortisol follows an ACTH-dependent circadian rhythm, with a peak level in the morning and decreasing levels throughout the day. Most serum cortisol, all but about 4%, is bound to proteins including corticosteroid binding globulin and serum albumin (1,3). Only free cortisol is available to most receptors and it is through these receptors that physiological processes are modulated. Abnormal cortisol levels are being evaluated for correlation with a variety of different conditions, such as prostate cancer (4), depression (5), and schizophrenia (6). It is already known that abnormal levels of cortisol are involved in Cushing's Syndrome and Addison's disease (7).

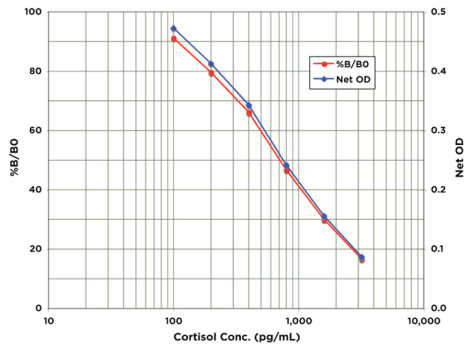
References

1. E. Friess, et al., Eur J Clin Invest, 2000, 30, Suppl 3:46-50.
2. Freeman, Scott, 2002. Biological Science. Prentice Hall; 2nd Pkg edition (December 30, 2004).

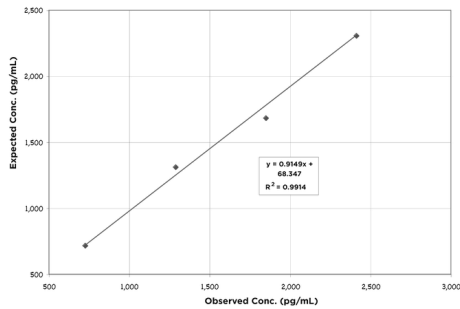
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4. J. Herbert, Lancet, 1995 345, 1193-1194.
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7. W.M. Jeffries, Med. Hypotheses, 1998, 51, 114-4.

Product Images

Typical Standard Curve for the Cortisol EIA Kit (Enzyme Immunoassay) StressXpress® – SKT-201. Assay Type: Sandwich EIA. Detection Method: Colorimetric Assay. Assay Range: 100 – 3200 pg/ml.



Linearity was determined by taking two human urine samples diluted 1:140, one with a low diluted cortisol level of 163.9 pg/mL and one with a higher diluted level of 2,974.9 pg/mL and mixing them in the ratios given below. The measured concentrations were compared to the expected values based on the ratios used.



Product Citations (0)

Currently there are no citations for this product.

Reviews

There are no reviews yet.