Datasheet for ABIN5695812

Cortisol ELISA Kit

2 Images

Go to Product page

Overview

Quantity:	96 tests
Target:	Cortisol
Reactivity:	Various Species
Method Type:	Sandwich ELISA
Detection Range:	100 pg/mL - 3200 pg/mL
Minimum Detection Limit:	100 pg/mL
Application:	ELISA

Product Details

Purpose:	Quantitative colorimetric detection of cortisol
Sample Type:	Fecal, Plasma (EDTA), Plasma (heparin), Saliva, Serum, Tissue Culture Medium, Urine
Analytical Method:	Quantitative
Detection Method:	Colorimetric
Sensitivity:	17.3 pg/mL
Characteristics:	EIA kit used to quantitatively measure cortisol present in samples.
Components:	• Clear Microtitre 96 well Plate • Cortisol Standard • StressXpress® Cortisol Antibody • StressXpress® Cortisol Conjugate • Assay Buffer • Dissociation Reagent

Product Details

- Wash Buffer Concentrate
- TMB Substrate
- Stop Solution
- Plate Sealer

Target Details

Target:	Cortisol
Abstract:	Cortisol Products
Target Type:	Hormone
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. In the metabolic aspect, cortisol promotes gluconeogenesis, liver glycogen deposition, and the reduction of glucose utilization. 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. 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, depression, and schizophrenia. It is already known that abnormal levels of cortisol are involved in Cushing's Syndrome and Addision's disease.

Application Details

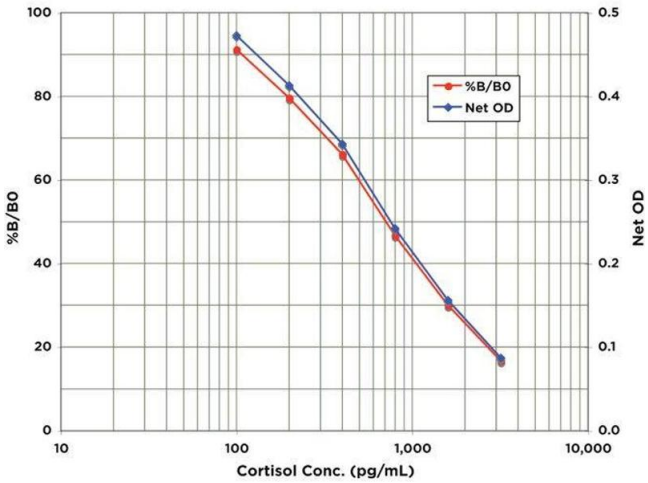
Assay Time:	1.5 h
Plate:	Pre-coated
Protocol:	The Cortisol EIA kit is designed to quantitatively measure cortisol present in dried fecal extracts, saliva, urine, serum, plasma and tissue culture media samples. This kit measures total cortisol in extracted samples and in serum and plasma and free cortisol 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

Application Details

	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.
Assay Procedure:	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.
Assay 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
Restrictions:	For Research Use only

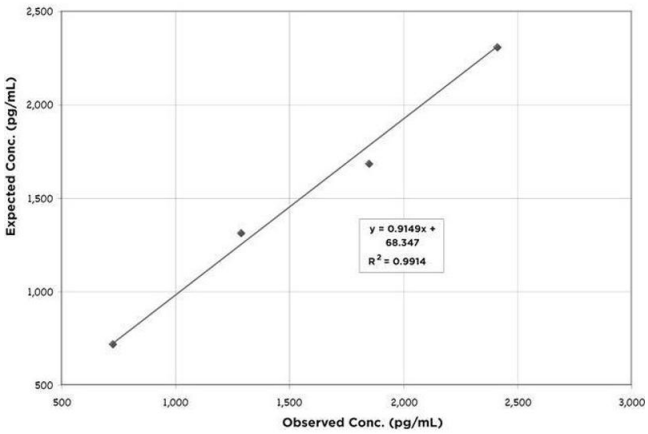
Handling

Storage:	4 °C



ELISA

Image 1. Typical Standard Curve for the Cortisol EIA Kit (Enzyme Immunoassay) Assay Type: Sandwich EIA. Detection Method: Colorimetric Assay. Assay Range: 100 - 3200 pg/ml.



ELISA

Image 2. 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.