

DetectX™

NEW!!

Corticosterone Enzyme Immunoassay Kit

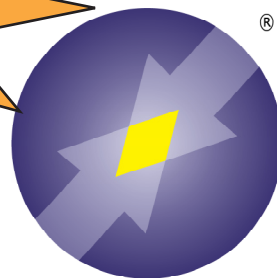
Catalog Number: K014-H1

FEATURES

Validated for a wide range of fecal, serum and plasma samples

Simple, stable kit stored at 4°C

High optical density and wide range



**ARBOR
ASSAYS**

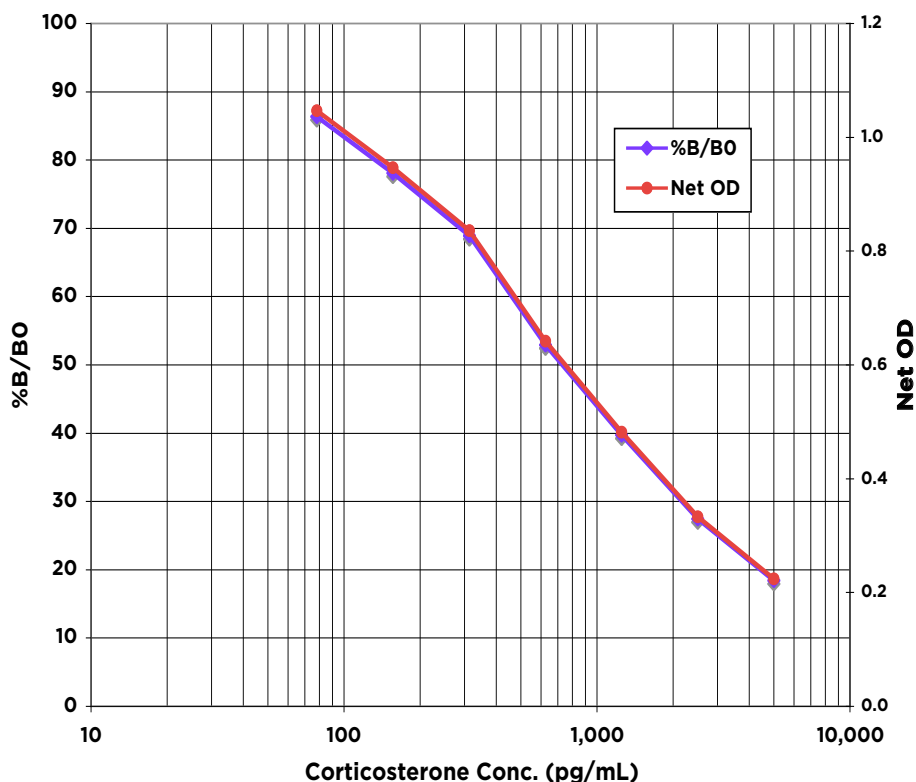
INTRODUCTION

The new DetectX™ Corticosterone Enzyme Immunoassay kit measures corticosterone present in extracted fecal samples and in serum and plasma samples. The kit has been developed to measure extracted fecal samples and has been validated with nine species of animal samples. A corticosterone standard is provided to generate a standard curve for the assay. Standards or diluted samples are pipetted into a clear microtiter plate coated with an antibody. A corticosterone-peroxidase conjugate is added to the wells. The binding reaction is initiated by the addition of a polyclonal antibody to corticosterone. After an hour incubation the plate is washed and substrate is added. The substrate reacts with the bound corticosterone-peroxidase conjugate. After a short incubation, the reaction is read at 450 nm wavelength. The concentration of the corticosterone in the sample is calculated using software available with most plate readers.

SAMPLE TYPES

Extracted fecal samples. Serum and plasma samples.

TYPICAL DATA



Animal Feces	pg Corticosterone measured/mg feces
Addoro Gazelle	20.7
Amur Tiger	28.4
Giraffe	13.8
Kudu	15.7
Lion	81.6
Reeves Muntjac	13.9
White Handed Gibbon	8.0
White Rhino	7.8
Zebra	8.8

SAMPLE PREPARATION

Serum samples should be diluted $\geq 1:50$ with the provided Assay Buffer. Plasma samples should be diluted $\geq 1:25$ with the provided Assay Buffer. Dried fecal samples should be extracted with ethanol - see <http://www.ArborAssays.com/resources/lit.asp> for detailed instructions. TCM samples should be diluted in TCM and read off a standard curve generated in the same TCM.

ASSAY PROTOCOL

- Pipet 50 μ L of samples or standards into duplicate wells in the microtiter plate.
- Add 25 μ L of the DetectX™ Corticosterone-Peroxidase Conjugate, followed by 25 μ L of Corticosterone Antibody to each well and incubate for 60 minutes. Wash 4 times with wash buffer.
- Add 50 μ L of TMB substrate to each well and incubate for 30 minutes.
- Add 50 μ L of stop solution to each well and read at 450 nm.

SENSITIVITY

Sensitivity was determined as 18.6 pg/mL.

LINEARITY

Linearity was determined in diluted human serum. Two serum samples were treated with Dissociation Reagent and diluted 1:50 with Assay Buffer, one with a low diluted corticosterone level of 104.6 pg/mL and one with a higher diluted level of 2,890.5 pg/mL, and mixing them in the ratios given below.

Low Sample	High Sample	Expected Conc. pg/mL	Observed Conc. pg/mL	% Recovery
80%	20%	654.0	661.8	96.4
60%	40%	1,232.3	1,219.0	99.3
40%	60%	1,763.9	1,776.1	101.1
20%	80%	2,249.5	2,333.3	98.8
			Mean Recovery	98.9%

INTRA ASSAY PRECISION

Four diluted human samples were run in replicates of 20 in an assay. The mean and precision of the calculated corticosterone concentrations were:

Sample	Corticosterone Conc. (pg/mL)	%CV
1	2,460.6	6.3
2	601.5	6.5
3	371.6	3.1
4	259.0	4.8

INTER ASSAY PRECISION

Four diluted human samples were run in duplicates in multiple assays over multiple days by four operators. The mean and precision of the calculated corticosterone concentrations were:

Sample	Corticosterone Conc. (pg/mL)	%CV
1	2,618.3	7.5
2	630.1	6.4
3	267.9	9.9
4	1.23	13.4

CROSS REACTIVITY

Steroid	Cross Reactivity	Steroid	Cross Reactivity
Desoxycorticosterone	12.3%	Cortisol	0.38%
Tetrahydrocorticosterone	0.76%	Progesterone	0.24%
Aldosterone	0.62%	Cortisone & Estradiol	<0.08%