ARBOR ASSAYS
Interactive Assay Solutions™

# REPRODUCTIVE ASSAY KITS

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## ORDERING

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# 17-Hydroxyprogesterone EIA Kits

**Catalog No: K053-H1 (1 Plate) K053-H5 (5 Plate)**

## FEATURES

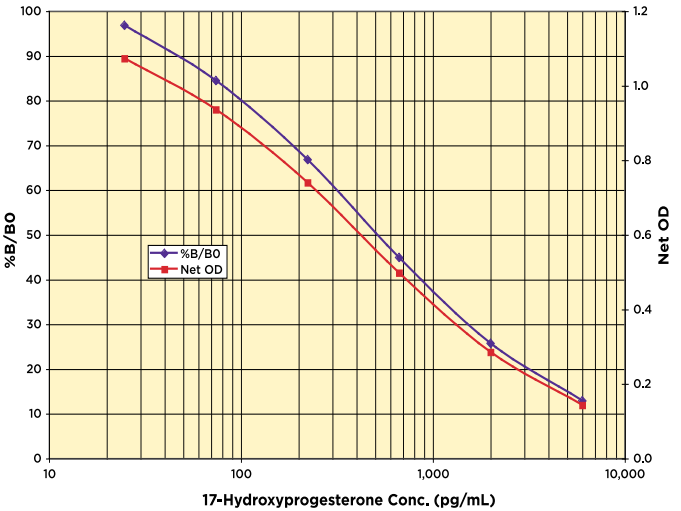
- Use — Congenital Adrenal Hyperplasia Marker
- Sample — Urine and Extracted Serum, Plasma, and Fecal
- Time to Answer — 1.5 Hours
- Format — 96-Well, Break-Apart Strip
- Species — Species Independent
- Samples/Kit — 40 or 232 in Duplicate
- Stability — Liquid 4°C Stable Reagents
- Readout — Colorimetric, 450 nm

MULTI SPECIES

MOST SENSITIVE

## SCIENTIFIC RELEVANCE

17-Hydroxyprogesterone is a steroid hormone from the androgen group found in mammals, reptiles, birds, and other vertebrates. It was first isolated by Pfiffner and North in 1940. It is primarily produced in the adrenal glands but is also produced in the corpus luteum of the ovary. It is hydroxylated at the 11 and 21 positions to produce cortisol. A deficiency of either 11- or 21-hydroxylase results in decreased cortisol synthesis, and feedback inhibition of adrenocorticotropic hormone (ACTH) secretion is lost. Consequent increased pituitary release of ACTH will increase production of 17HO-P. But, if 17-alpha-hydroxylase or 3ß-hydroxysteroid dehydrogenase type 2 are deficient, 17HO-P levels are low with possible increase in progesterone or pregnenolone respectively. Normal levels are 3-90 ng/dL in children. In women, normal levels are 20-100 ng/dL prior to ovulation, and 100-500 ng/dL during the luteal phase.



# Aldosterone EIA and CLIA Kits

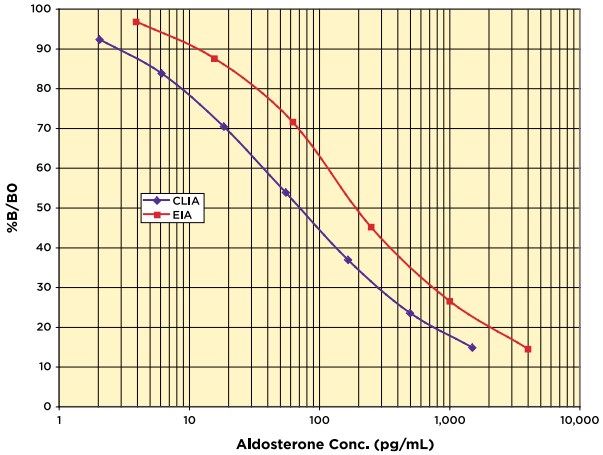
**EIA Catalog No: K052-H1 (1 Plate) K052-H5 (5 Plate)**
**CLIA Catalog No: K052-C1 (1 Plate) K052-C5 (5 Plate)**

## FEATURES


- Use — Reproductive Assessment
- Sample — Urine and Extracted Serum, Plasma, and Fecal
- Time to Answer — 2.5 Hours or Overnight
- Sensitivity — To 4.97 pg/mL (EIA) or 1.84 pg/mL (CLIA)
- Species — Species Independent
- Samples/Kit — 40/232 (EIA) or 39/231 (CLIA) in Duplicate
- Stability — Liquid 4°C Stable Reagents
- Readout — EIA: 450 nm CLIA: Glow Luminescent

## SCIENTIFIC RELEVANCE

Aldosterone is a mineralocorticoid first isolated by the husband and wife team of Simpson and Tait at University College, London. Aldosterone controls the sodium-potassium balance through unidirectional salt reabsorption in a variety of tissues and glands. Synthesized from cholesterol in the zona glomerulosa of the adrenal cortex, secretion is regulated through the renin-angiotensin system. Angiotensin II and potassium stimulate primary secretion by increasing the rate of production of the steroid. Peripheral aldosterone levels are dependent on age and body position. Aldosterone measurement is useful in the investigation of primary and secondary aldosteronism including vascular disease, salt depletion, potassium loading, cardiac failure with ascites, and pregnancy.



# Allopregnanolone EIA Kits, Monoclonal Antibody Based

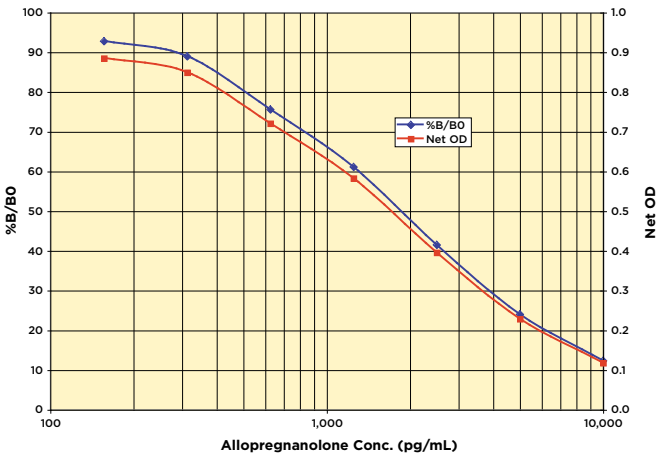
**Catalog No: K061-H1 (1 Plate) K061-H5 (5 Plate)**

## FEATURES

- Use — Measure Allopregnanolone in a Variety of Samples
- Sample — Urine, TCM or Extracted Serum, Plasma, and Fecal
- Time to Answer — 2.5 Hours or Overnight
- Range — 10,000 – 156.3 pg/mL
- Species — Species Independent
- Samples/Kit — 39 or 231 in Duplicate
- Cross Reactivity — Low Cross Reactivity to Progesterone and Metabolites
- Readout — Colorimetric, 450 nm


## SCIENTIFIC RELEVANCE

Allopregnanolone (3α-hydroxy-5α-pregnan-20-one, THP, THPROG) is a prototypic neurosteroid present in the blood and the brain. It is a metabolite of progesterone and potent modulator of $GABA_A$ receptors. Allopregnanolone has pharmacological properties including anxiolytic and anticonvulsant activity. The biosynthesis of allopregnanolone involves the conversion of progesterone into 5α-dihydroprogesterone by the enzyme 5α-reductase type I. Subsequently, 3α-hydroxysteroid oxidoreductase isoenzymes convert this intermediate into allopregnanolone. Anxiety and depression are common side effects of 5α-reductase inhibitors such as finasteride and dutasteride, and they are believed to be caused, in part, by the prevention of the endogenous production of allopregnanolone. Allopregnanolone aids neurogenesis and has been found to reverse neuron proliferative deficit and cognitive deficits in mouse models of Alzheimer's disease.



# Arg[8]-Vasopressin (AVP) CLIA Kits

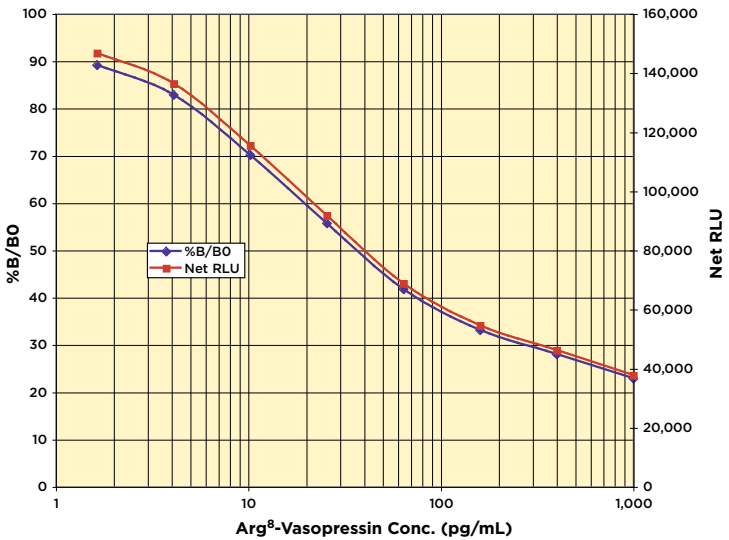
**Catalog No: K049-C1 (1 Plate) K049-C5 (5 Plate)**

## FEATURES

- Use — Measure AVP in Mammals, Arg-Vasotocin in Birds and Reptile
- Sample — Extracted Serum, Plasma, Buffers
- Time to Answer — Overnight
- Format — 96-Well, Break-Apart Strip
- Samples/Kit — 38 or 230 in Duplicate
- Stability — Liquid 4˚C Stable Reagents
- Readout — Glow Luminescence


## SCIENTIFIC RELEVANCE

The neurohypophysial hormone arginine vasopressin (AVP), also known as an antidiuretic hormone, is involved in a wide range of physiological regulatory processes, including renal water reabsorption, cardiovascular homeostasis, hormone secretion from the anterior pituitary, and modulation of social behavior and emotional status. AVP and the structurally related posterior pituitary hormone, oxytocin (OT), are synthesized in the paraventricular nucleus and the supraoptic nucleus of the hypothalamus. AVP is a 9 amino acid peptide with a 6-member disulfide ring. It is structurally related to oxytocin, differing by 2 amino acids.



# Ceruloplasmin (Cp) Colorimetric Activity Kit

**Catalog No: K035-H1 (2 Plate)**

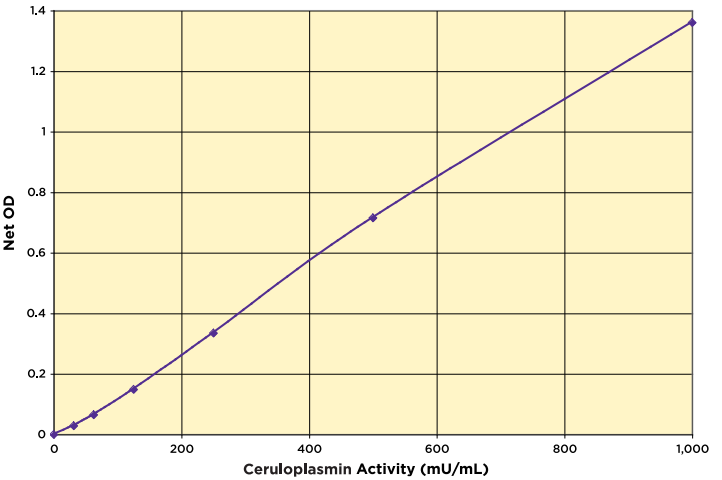
## FEATURES

MULTI SPECIES

| | |
|---|---|
| Use | Non-Invasive Pregnancy Marker |
| Sample | Urine and Serum |
| Validation | Humans, Felids, Polar Bear, Panda |
| Species | Multiple Species |
| Time to Answer | 60 Minutes |
| Format | 96-Well |
| Samples/Kit | 89 in Duplicate |
| Stability | Liquid 4°C Stable Reagents |
| Readout | Colorimetric, 560 nm |

## SCIENTIFIC RELEVANCE

Ceruloplasmin (Cp) is an acute phase multicopper oxidase enzyme that normally plays a protective role in responses to immune-provoking stimuli. Cp is also associated with reproduction. Estrogens alter the subcellular distribution of copper in the liver, leading to an increase in plasma copper levels and subsequent ceruloplasmin synthesis. Serum levels of Cp have been shown to increase during normal pregnancy in some species possibly as a protection against the oxidative costs of reproduction. In giant pandas and some felids, urinary Cp activity has been shown to be elevated in pregnant vs. pseudopregnant animals beginning in the first week of gestation and continuing throughout the luteal phase.



# Creatinine Urinary Detection Kits/Solutions

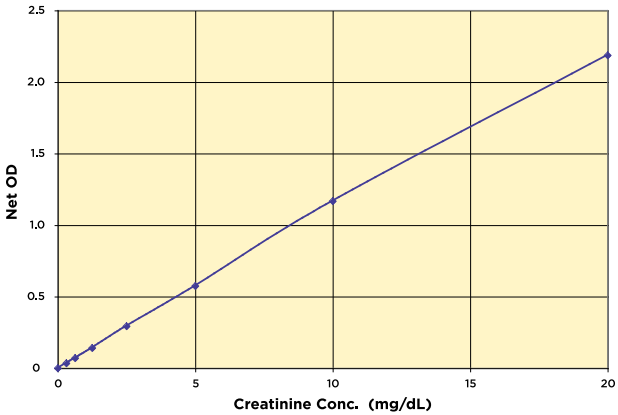
**Kits Catalog No: K002-H1 (2 Plate) K002-H5 (10 Plate)**
**Solutions Catalog No: X116-100ML (10 mg/dL) X120-25ML (20 mg/dL)**

## FEATURES

- Use — Urine Volume Marker
- Sample — Urine
- Calibrated — NIST Standard Reference #914a
- Species — Species Independent
- Time to Answer — 30 Minutes
- Format — 96-Well
- Samples/Kit — 88 or 472 in Duplicate
- Stability — Liquid 4°C Stable Reagents
- Readout — Colorimetric, 490 nm


## SCIENTIFIC RELEVANCE

Creatinine (2-amino-1-methyl-5H-imadazol-4-one) is a metabolite of phosphocreatine (p-creatine), a molecule used as a store for high-energy phosphate that can be utilized by tissues for the production of ATP. Creatine either comes from the diet or is synthesized from the amino acids arginine, glycine, and methionine. This occurs in the kidneys and liver, although other organ systems may be involved and species-specific differences may exist. Creatine and p-creatine are converted non-enzymatically to the metabolite creatinine, which diffuses into the blood and is excreted by the kidneys. Creatinine forms spontaneously from p-creatine. Under normal conditions, its formation occurs at a rate that is relatively constant and as intra-individual variation is <15% from day to day, creatinine is a useful tool for normalizing the levels of other molecules found in urine. Additionally, altered creatinine levels may be associated with conditions that result in decreased renal blood flow such as diabetes and cardiovascular disease.



# Dehydroepiandrosterone Sulfate (DHEA-S) EIA Kits

**Catalog No: K054-H1 (1 Plate) K054-H5 (5 Plate)**

## FEATURES

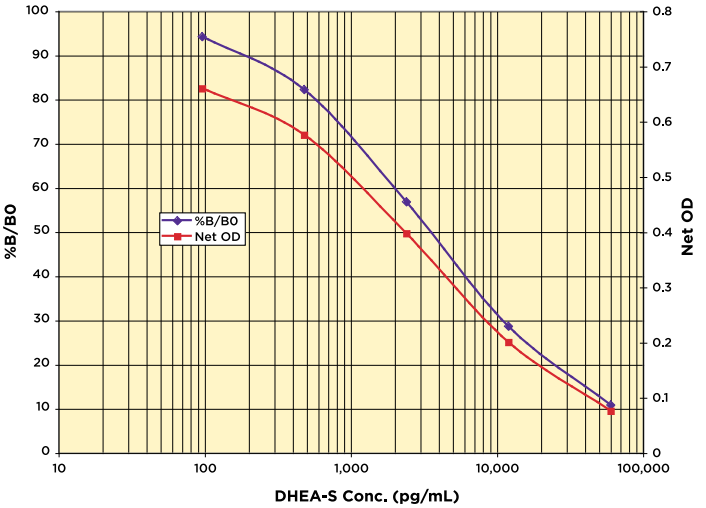
- Use — Estrogen Deficiency
- Sample — Serum, Plasma, Saliva, Urine, Media, and Fecal Extracts
- Validation — Human, Monkey, Felids, Ungulates
- Time to Answer — 2.5 Hours
- Format — 96-Well, Break-Apart Strip
- Species — Species Independent
- Samples/Kit — 41 or 233 in Duplicate
- Stability — Liquid 4°C Stable Reagents
- Readout — Colorimetric, 450 nm

MULTI SPECIES

MOST SENSITIVE

## SCIENTIFIC RELEVANCE

Dehydroepiandrosterone sulfate (DHEA-S) is the major C19 steroid secreted by the adrenal cortex, and is a precursor to testosterone and estrogen biosynthesis. It is produced by the addition of a sulfate group to dehydroepiandrosterone (DHEA), catalyzed by the sulfotransferase enzymes, SULT1A1 and SULT1E1, which also produce estrone sulfate from estrone. Due to the 17-ketone group rather than hydroxyl group, DHEA-S has relatively low androgenic activity. The bioactivity of DHEA-S may be high due to its serum concentrations at 100-1,000 - fold higher than testosterone or DHEA and its weak affinity for sex-hormone binding globulin.



# Epiandrosterone EIA Kits

**Catalog No: K063-H1 (1 Plate)  K063-H5 (5 Plate)**

## FEATURES

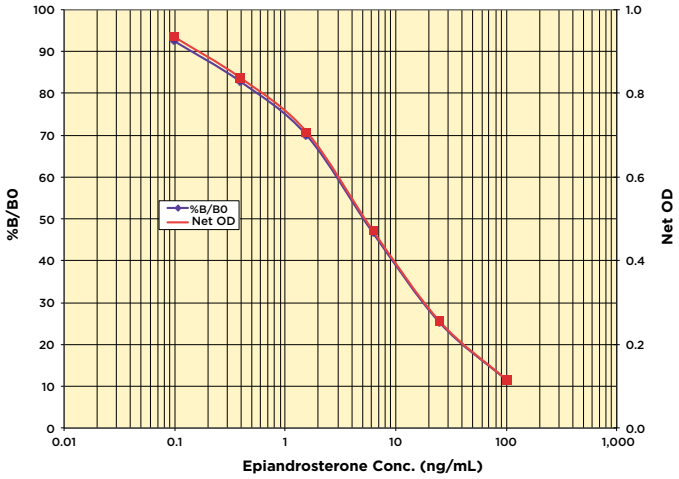
- Use — Measure Epiandrosterone in a Variety of Matrices
- Sample — Fecal Extracts, Urine, Saliva, Extracted Serum/Plasma
- Sensitivity — 0.120 ng/mL
- Time to Answer — 2.5 Hours
- Samples/Kit — 40 or 232 in Duplicate
- Stability — Liquid 4°C Stable Reagents

MULTI SPECIES

MOST SENSITIVE

## SCIENTIFIC RELEVANCE

Epiandrosterone is a naturally occurring metabolite of dehydroepiandrosterone (DHEA) found in most mammals and produced via the action of the 5α-reductase enzyme. It is a weak androgen formed primarily in peripheral tissues, released into circulation and ultimately excreted in urine. Epiandrosterone has been shown to inhibit the pentose phosphate pathway (PPP), decreasing intracellular NADPH levels. It also attenuates NO-evoked relaxation of the pulmonary artery. It has been linked to gonadal activity and sexual behavior in males. Epiandrosterone is of interest for cell metabolism, cardiac, and prostate cancer research.



# Estradiol EIA Kits

**Catalog No Non-Invasive:** K030-H1 (1 Plate) K030-H5 (5 Plate)

**Catalog No Serum:** KB30-H1 (1 Plate) KB30-H5 (5 Plate)

MULTI SPECIES

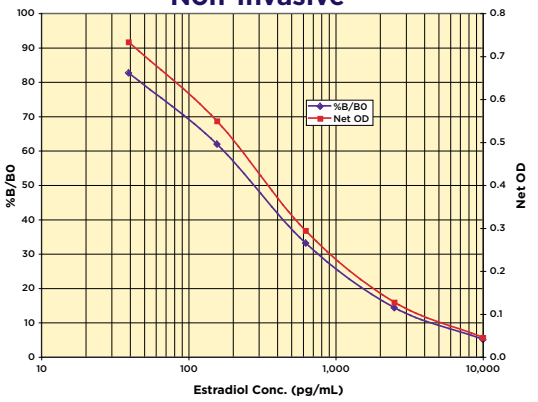
## FEATURES

- Use: Estrogen Assessment
- Sample: K030: Urine, Media, and Fecal<br>KB30: Serum and Plasma
- Validation: Mice, Rats, Humans, Monkeys, Birds, Felids, Ungulates
- Time to Answer: 2.5 Hours
- Format: 96-Well, Break-Apart Strip
- Species: Species Independent
- Samples/Kit: K030: 41 or 233 in Duplicate<br>KB30: 40 or 232 for in Duplicate
- Stability: Liquid 4°C Stable Reagents
- Readout: Colorimetric, 450 nm

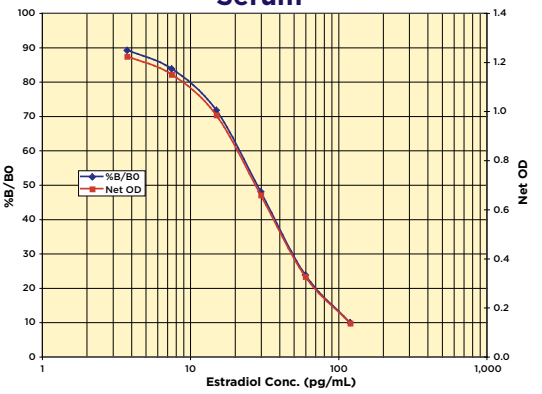
## SCIENTIFIC RELEVANCE

Estradiol (E2 or 17ß-estradiol, also oestradiol) is the predominant sex hormone present in females. It is also present in males, being produced as an active metabolic product of testosterone. It represents the major estrogen in humans. Estradiol has not only a critical impact on reproductive and sexual functioning, but also affects other organs. Serum estradiol measurements in women reflect primarily the activity of the ovaries. As such, they are useful in the detection of baseline estrogen in women with amenorrhea or menstrual dysfunction and to detect the state of hypoestrogenicity and menopause. Furthermore, estrogen monitoring during fertility therapy assesses follicular growth. Estrogen-producing tumors and in precocious puberty samples will demonstrate persistent high levels of estradiol and other estrogens.

**Non-Invasive**




**Serum**



# Estriol EIA Kits

**Catalog No: K064-H1 (1 Plate)  K064-H5 (5 Plate)**

## FEATURES

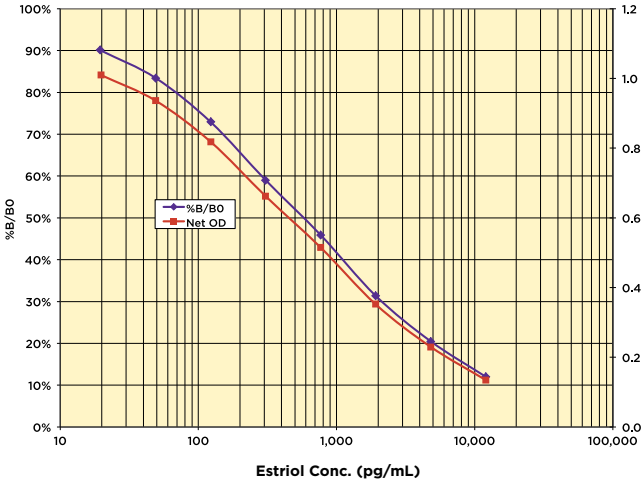
- Use — Estrogen Assessment
- Sample — Urine, Saliva, and Fecal
- Time to Answer — 2.5 Hours or Overnight
- Format — 96-Well, Break-Apart Strip
- Species — Species Independent
- Samples/Kit — 38 or 230 in Duplicate
- Readout — Colorimetric, 450 nm

MULTI SPECIES

## SCIENTIFIC RELEVANCE

Estriol is one of the three major endogenous estrogens, along with estradiol and estrone. It is a weak estrogen derived from hydroxylation of estradiol and estrone in the liver and normal levels in women who are not pregnant are typically nearly undetectable. However, estriol is produced in large amounts by the placenta and rising maternal levels can be detected from the very early weeks of pregnancy through until delivery.

Estriol can be monitored as an indicator of fetal health and well-being during pregnancy. It is routinely measured as part of both the triple test and the quadruple test during pregnancy outreach and screening. Abnormally low levels in pregnant females can suggest chromosomal or congenital anomalies in the fetus. In some parts of the world exogenous estriol is used for the treatment of menopausal symptoms. Estriol has also been investigated as a protective neurosteroid with potential roles in immune diseases and bone and lipid metabolism.





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# Estrone EIA Kits

**Catalog No: K031-H1 (1 Plate) K031-H5 (5 Plate)**

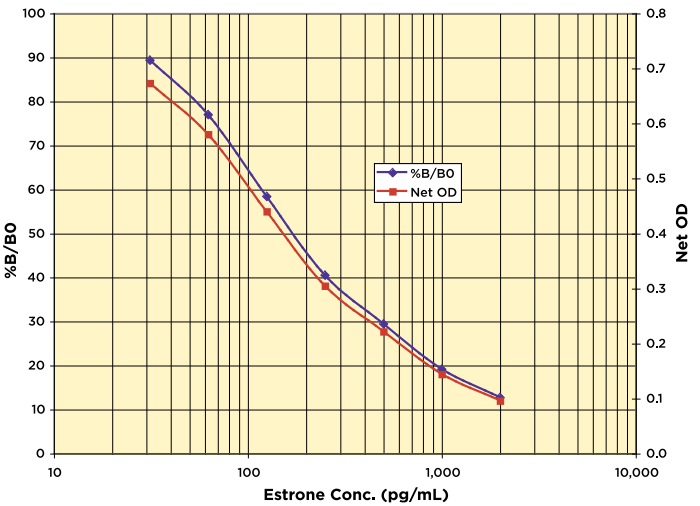
## FEATURES

MULTI SPECIES

| | |
|---|---|
| Use | Inborn Errors of Sex Steroid Metabolism |
| Sample | Urine, Fecal Extracts, and Media |
| Validation | Multiple Species |
| Time to Answer | 2.5 Hours |
| Format | 96-Well, Break-Apart Strip |
| Species | Species Independent |
| Samples/Kit | 39 or 231 in Duplicate |
| Stability | Liquid 4°C Stable Reagents |
| Readout | Colorimetric, 450 nm |

## SCIENTIFIC RELEVANCE

Estrone, also known as E1 or osterone (3-hydroxy-1,3,5(10)-estratrien-17-one) is a C-18 steroid hormone and is one of the three naturally occurring estrogens, the others being estradiol and estriol. Estrone is produced primarily from androstenedione originating from the gonads or the adrenal cortex and from estradiol by 17-hydroxysteroid dehydrogenase enzyme systems. Estrone concentrations in premenopausal mammals fluctuate according to the menstrual cycle. In premenopausal women, more than 50% of the estrone is secreted by the ovaries. Interconversion of estrone and estradiol also occurs in peripheral tissue. In humans, during the follicular phase of the menstrual cycle estrone levels increase slightly.



# Estrone-3-Glucuronide (E1G) EIA Kits

**Catalog No: K036-H1 (1 Plate)  K036-H5 (5 Plate)**

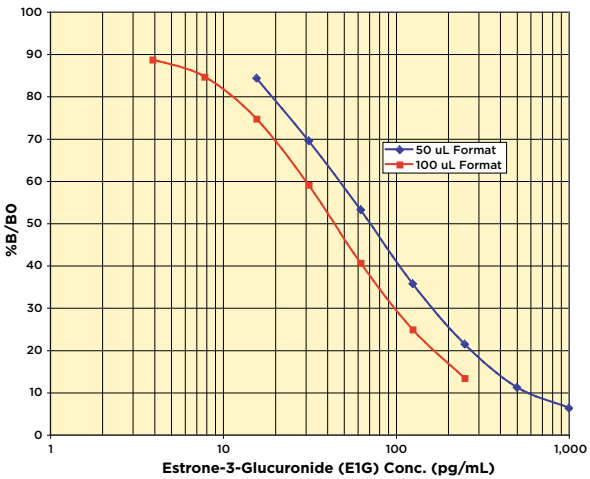
## FEATURES

- Use — Estrogen Assessment
- Sample — Urine, Media, and Fecal Extracts
- Validation — Multiple Species
- Time to Answer — 2.5 Hours
- Format — 96-Well, Break-Apart Strip
- Species — Species Independent
- Samples/Kit — 39 or 231 in Duplicate
- Stability — Liquid 4°C Stable Reagents
- Readout — Colorimetric, 450 nm

MULTI SPECIES

## SCIENTIFIC RELEVANCE

Estrone-3-glucuronide (1,3,5(10)-estratrien-3-ol-17-one glucosiduronate, E1G) is the principle secreted form of circulating estradiol in mammals. Ovulation is the critical event of each menstrual cycle that occurs during the reproductive life of healthy females and the ovum can only be fertilized during the short period of time in which it is viable. The three phases of the menstrual cycle are: (i) an initial phase when there is only a low risk that would enable viable spermatazoa to survive and reach the ovum, (ii) a phase when the chance of fertilization is at a maximum, the fertile period, and (iii) a time of absolute infertility when the ovum is no longer viable. Clinical studies have indicated the utility of measuring estrone-3-glucuronide (E1G) and pregnanediol-3α-glucuronide (PDG) in samples of urine or fecal extracts to monitor ovarian function in females.



# Estrone-3-Sulfate (E1S) EIA Kits

**Catalog No: K038-H1 (1 Plate) K038-H5 (5 Plate)**

## FEATURES

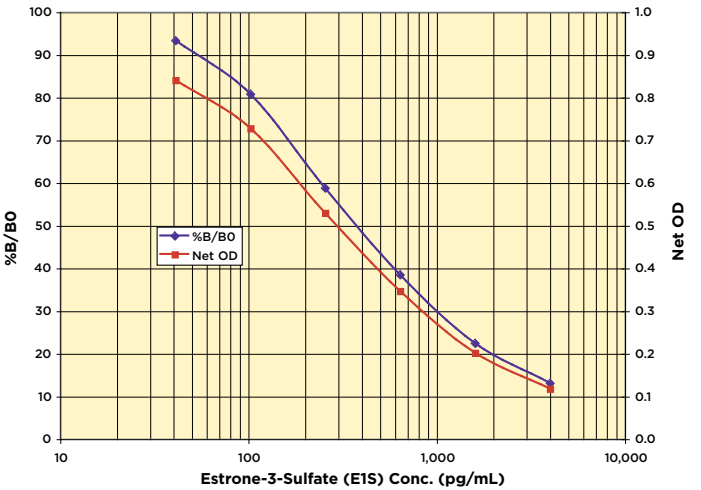
MULTI SPECIES

MOST SENSITIVE

| | |
|---|---|
| Use | Breast Cancer and Cryptorchidism |
| Sample | Serum, Plasma, Urine, Fecal Extracts and Media |
| Time to Answer | 2.5 Hours |
| Format | 96-Well, Break-Apart Strip |
| Species | Species Independent |
| Samples/Kit | 40 or 232 in Duplicate |
| Stability | Liquid 4°C Stable Reagents |
| Readout | Colorimetric, 450 nm |

## SCIENTIFIC RELEVANCE

Estrone-3-sulfate (E1S) is synthesized in the fetal or cotyledonary portion of the placentome. Estrone sulfate, which is present in plasma at a higher concentration than either unconjugated estrone or estradiol in nonpregnant women and normal men, appears to originate almost entirely from a conjugation of estrone and converted estradiol in non-glandular tissues. Estrone sulfate is quantitatively the most important circulating estrogen. Breast tumors contain sulfatase activity and can convert estrone sulfate into estradiol. Cryptorchidism where one or both testicles fail to descend is considered to be a prevalent defect in horses. Bilaterally cryptorchid stallions do not produce viable spermatozoa but often exhibit normal secondary sexual characteristics. Several investigators have suggested measuring testosterone and estrone sulfate serum levels as reliable diagnostic aids for the condition.



# Levonorgestrel (LNG) EIA Kits

**Catalog No: K058-H1 (1 Plate)  K058-H5 (5 Plate)**

## FEATURES

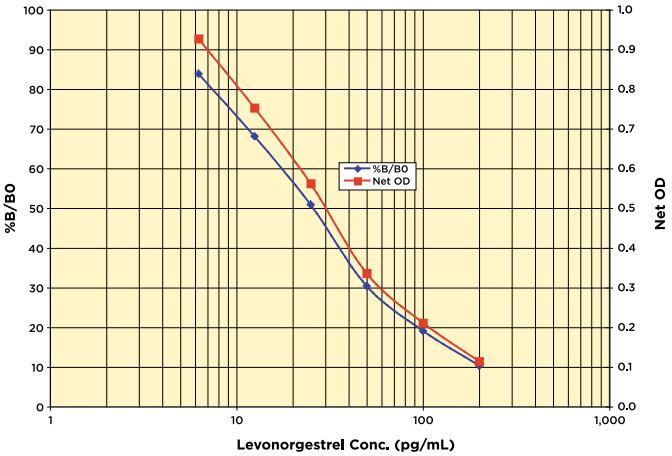
- Use — Measure LNG in a Variety of Matrices
- Sample — Saliva, Urine, Water, Milk, TCM, and Extracted Serum, Plasma and Fecal Material
- Time to Answer — 1.5 Hours
- Sensitivity — 2.20 pg/mL
- Species — Species Independent
- Samples/Kit — 40 or 232 in Duplicate
- Readout — Colorimetric, 450 nm

MULTI SPECIES

MOST SENSITIVE

## SCIENTIFIC RELEVANCE

Levonorgestrel (LNG) is a synthetic steroid commonly used for contraception, treatment of dysmenorrhea, and for endometrial protection during estrogen replacement therapy in postmenopausal women. LNG has also been shown to be an effective treatment modality for a variety of gynecologic conditions including: heavy menstrual bleeding, pelvic pain, endometrial hyperplasia and early stage endometrial cancer. LNG is safe to use while breastfeeding and works by decreasing ovulation, changing the mucus in the cervix to prevent the passage of sperm and altering the uterine lining. Quantitative measurement of LNG in biological samples can be useful for determining if target therapeutic concentrations are being met and maintained. LNG can also be measured in environmental samples using this kit. Environmental LNG can have toxic effects in aquatic ecosystems.



# Oxytocin EIA and CLIA Kits/Solutions

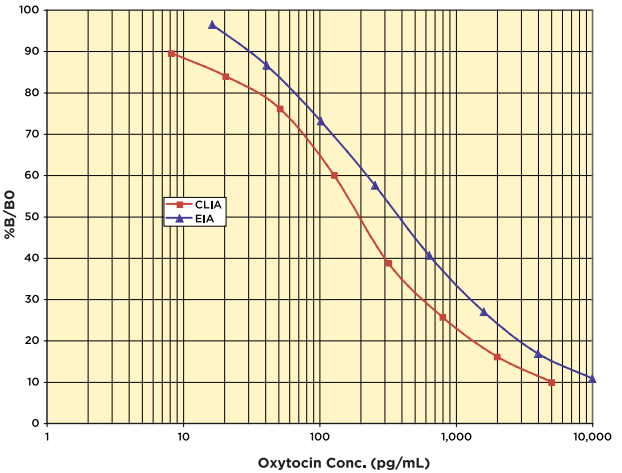
**EIA Catalog No: K048-H1 (1 Plate) K048-H5 (5 Plate)**
**CLIA Catalog No: K048-C1 (1 Plate) K048-C5 (5 Plate)**
**Solutions Catalog No: Isotocin X128-625UL Mesotocin X127-625UL**

## FEATURES

- Use — Reproductive Assessment
- Sample — Clarified Milk and Extracted Serum, Plasma, and Saliva
- Time to Answer — Overnight
- Sensitivity — 17.0 pg/mL (EIA) or 6.33 pg/mL (CLIA)
- Species — Mammals, Birds, Fish
- Cross Reactivity — High Reactivity to Mesotocin and Isotocin
- Samples/Kit — 38 or 230 in Duplicate
- Readout — EIA: 450 nm CLIA: Glow Luminescence


## SCIENTIFIC RELEVANCE

The neuropeptides oxytocin and vasopressin were isolated and synthesized by Vincent du Vigneaud, work for which he received the Nobel Prize in Chemistry in 1955. Oxytocin is a neurohypophysial peptide produced in the hypothalamus. The molecule consists of nine amino acids linked with a [1-6] disulfide bond and a semi-flexible carboxyamidated tail. Highly conserved across species boundaries, oxytocin-like neurohypophysial peptides are substituted primarily at residues 4 and/or 8. In the oxytocin-like peptide, mesotocin; a common peptide found in some fishes, reptiles, amphibians, marsupials and non-mammalian tetrapods, the leucine at residue 8 is substituted for isoleucine. Oxytocin binds to specific cell surface receptors, which in turn initiate a secondary intracelluar response cascade via a phosphoinositide signaling pathway.



# PGFM (13,14-Dihydro-15-keto-Prostaglandin $F_{2\alpha}$) EIA Kits

**Catalog No: K022-H1 (1 Plate) K022-H5 (5 Plate)**

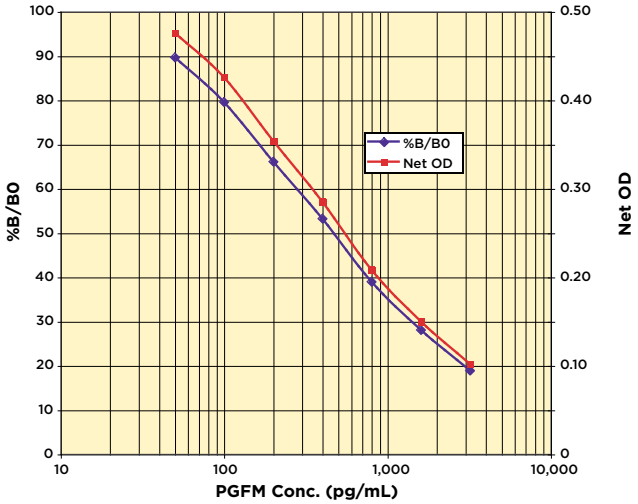
## FEATURES

- Use — Pregnancy Marker
- Sample — Serum, Plasma, Urine, Fecal Extracts and Media
- Validation — Felids and Pandas
- Time to Answer — 90 Minutes
- Format — 96-Well, Break-Apart Strip
- Species — Species Independent
- Samples/Kit — 39 or 231 in Duplicate
- Stability — Liquid 4°C Stable Reagents
- Readout — Colorimetric, 450 nm

MULTI SPECIES

## SCIENTIFIC RELEVANCE

Uterine and placental Prostaglandin $F_{2\alpha}$ ($PGF_{2\alpha}$) is involved in the regulation of reproductive and pregnancy-related processes such as embryonic development, initiation of parturition, and resumption of ovarian activity. In domestic ruminants, uterine tissue is a primary source of $PGF_{2\alpha}$ and secretion of uterine $PGF_{2\alpha}$ is a key regulator for the cyclical regression of the corpus luteum. Prostaglandin $F_{2\alpha}$ is metabolized to PGFM (13,14-dihydro-15-keto-$PGF_{2\alpha}$) during passage through the lungs. PGFM has a longer half-life in peripheral circulation than $PGF_{2\alpha}$ and has been applied as a useful analytical marker of $PGF_{2\alpha}$. PGFM is a useful non-invasive marker of pregnancy when measured in both urine and fecal samples. It has been shown to be a precise, practical method for this application in these matrices. Fecal PGFM analyses may allow pregnancy diagnosis in captive and free-ranging felids as well as pandas and other species.



# Pregnanediol-3-Glucuronide (PDG) EIA Kits

**Catalog No: K037-H1 (1 Plate) K037-H5 (5 Plate)**

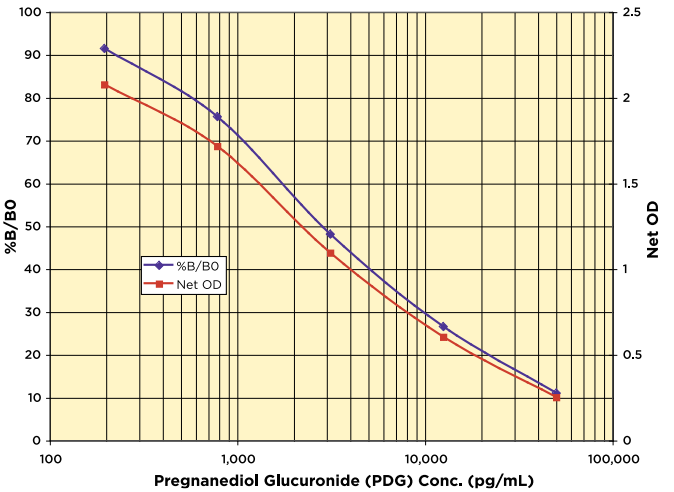
## FEATURES

MULTI SPECIES

| | |
|---|---|
| Use | Pregnancy Assessment |
| Sample | Urine, Media and Extracted Serum, Plasma, and Fecal |
| Validation | Multiple Species |
| Time to Answer | 2.5 Hours |
| Format | 96-Well, Break-Apart Strip |
| Species | Species Independent |
| Samples/Kit | 41 or 233 in Duplicate |
| Stability | Liquid 4°C Stable Reagents |
| Readout | Colorimetric, 450 nm |

## SCIENTIFIC RELEVANCE

Pregnanediol-3-Glucuronide also known as PDG (5ß-Pregnnan-3α,20α-diol 3-glucosiduronate), is the major metabolite of progesterone. Progesterone is a hormone involved in the female menstrual cycle, gestation and embryogenesis of humans and other species. Progesterone belongs to a class of hormones called progestogens and is the major naturally occurring human progestogen. Progesterone is an essential regulator of human female reproductive function in the uterus, ovary, mammary gland and brain, and play important roles in the cardiovascular, skeletal, and central nervous systems. Progesterone also has neurotrophic roles in the peripheral nervous system as it activates the growth and maturation of axons and stimulates the repair and replacement of myelin sheaths in regenerating nerve fibres.



# Progesterone EIA Kits

**Catalog No: K025-H1 (1 Plate)  K025-H5 (5 Plate)**

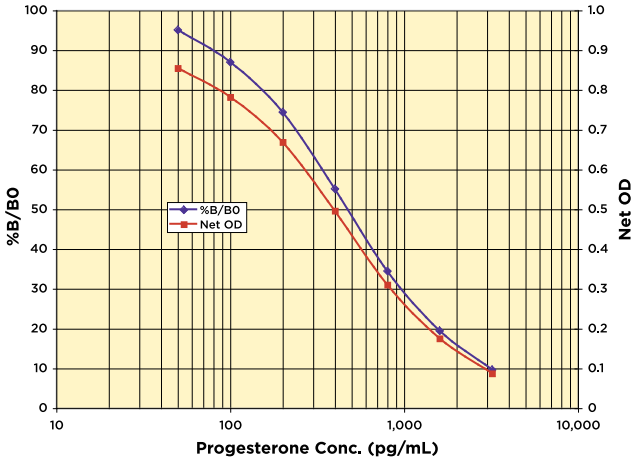
## FEATURES

- Use — Reproduction and Sex Steroid Metabolism
- Sample — Urine, Fecal Extracts, Media, Serum and Plasma
- Validation — Multiple Species
- Time to Answer — 2.5 Hours
- Sensitivity — 47.9 pg/mL
- Species — Species Independent
- Samples/Kit — 39 or 231 in Duplicate
- Stability — Liquid 4°C Stable Reagents
- Readout — Colorimetric, 450 nm

MULTI SPECIES

## SCIENTIFIC RELEVANCE

Progesterone, also known as P4 and (Pregn-4-ene-3,20-dione), is a C21 steroid hormone involved in the female menstrual cycle, gestation and embryogenesis of humans and other species. Progesterone belongs to a class of hormones called progestogens and is the major naturally occurring progestogen. Progesterone is an essential regulator of human female reproductive function in the uterus, ovary, mammary gland and brain, and plays important roles in non-reproductive tissues such as the cardiovascular, skeletal, and central nervous systems. Progesterone action is conveyed by two isoforms of the nuclear progesterone receptor (PR), PR-A and PR-B. PR-A and -B are expressed in a variety of normal breast tissue from humans, rats and mice and is also expressed in breast cancer cells. Progesterone also has neurotrophic roles in the peripheral nervous system as it activates the growth and maturation of axons and stimulates the repair and replacement of myelin sheaths in regenerating nerve fibres.



# Progesterone Metabolites EIA Kits

**Catalog No: K068-H1 (1 Plate) K068-H5 (5 Plate)**

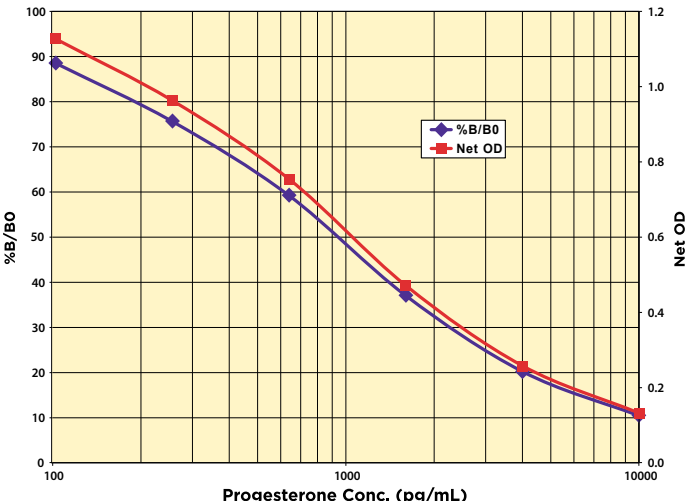
## FEATURES

MULTI SPECIES

- Use: Measure general progesterone metabolites and generate reproductive profiles
- Sample: Fecal Extracts, Urine
- Time to Answer: 90 Minutes
- Sensitivity: 51.2 pg/mL
- Species: Species Independent
- Samples/Kit: 40 or 232 in Duplicate
- Stability: Liquid 4°C Stable Reagents
- Readout: Colorimetric, 450 nm

## SCIENTIFIC RELEVANCE

Progesterone (P4, pregn-4-ene-3,20-dione) belongs to a class of hormones called progestogens, and is an essential regulator of female reproductive function in the uterus, ovary, mammary gland and brain. Progestogens are the primary hormones involved in the female menstrual cycle, gestation, and embryogenesis of humans and most other species. Progesterone can be metabolized and excreted as a variety of general progesterone by-products. Common metabolites include 5-reduced progesterone (pregnane), pregnanolones and hydroprogesterones. Measurement of progesterone metabolites provides vital data about reproductive status and is essential for studying reproductive and survival strategies of wildlife and endangered species. Likewise, assays measuring progesterone metabolites provide a clearer picture of hormonal regulation and reproduction.



# Prolactin (PRL) EIA Kit

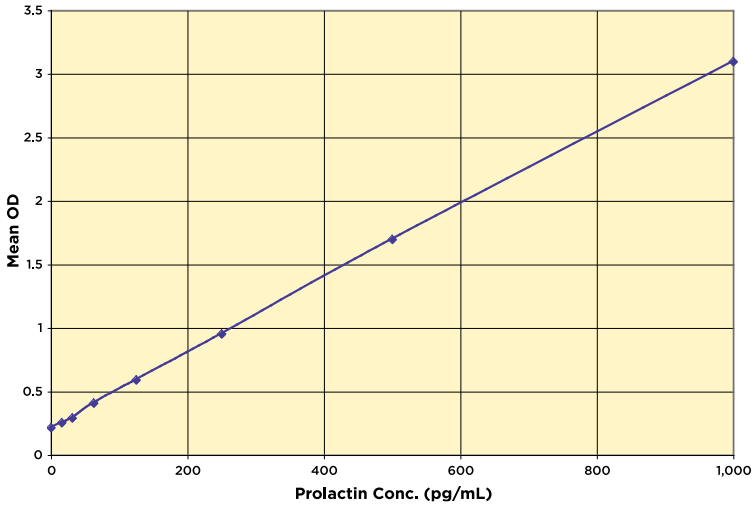
**Catalog No: K040-H1 (1 Plate)**

## FEATURES


- Use — Reproduction
- Sample — Serum and Plasma
- Validation — Humans and Elephants
- Time to Answer — 2.5 Hours
- Format — 96-Well, Break-Apart Strip
- Samples/Kit — 40 in Duplicate
- Stability — Liquid 4°C Stable Reagents
- Readout — Colorimetric, 450 nm

## SCIENTIFIC RELEVANCE

Prolactin (PRL) is a polypeptide hormone that is synthesized and secreted from specialized cells of the anterior pituitary gland. The hormone was given its name based on the fact that an extract of bovine pituitary gland would cause growth of the crop sac and stimulate the production of milk in pigeons or promote lactation in rabbit. However, it is now appreciated that prolactin has over 300 separate biological activities. Prolactin has multiple roles in reproduction other than lactation, and it also plays multiple homeostatic roles in the organism. Furthermore, the synthesis and secretion of prolactin is not restricted to the anterior pituitary gland, but multiple other organs and tissues in the body have this capability.



# Testosterone EIA Kits

**Catalog No: K032-H1 (1 Plate) K032-H5 (5 Plate)**

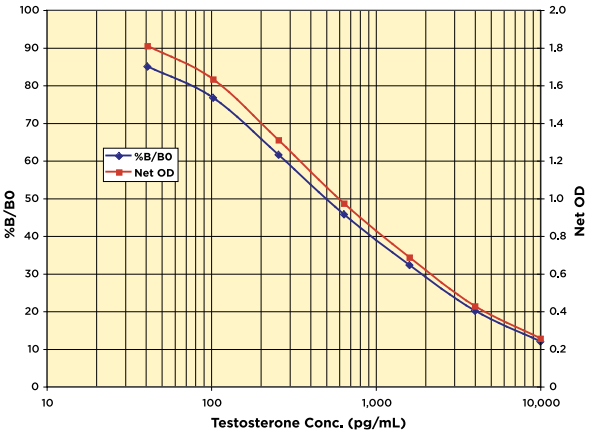
## FEATURES

MULTI SPECIES

| | |
|---|---|
| Use | Inborn Errors of Sex Steroid Metabolism |
| Sample | Urine, Media, and Extracted Serum, Plasma, and Fecal |
| Validation | Multiple Species |
| Time to Answer | 2.5 Hours |
| Format | 96-Well, Break-Apart Strip |
| Species | Species Independent |
| Samples/Kit | 39 or 231 in Duplicate |
| Stability | Liquid 4°C Stable Reagents |
| Readout | Colorimetric, 450 nm |

## SCIENTIFIC RELEVANCE

Testosterone (4-Androsten-17ß-ol-3-one) is an anabolic steroid hormone from the androgen group and is found in mammals, reptiles, birds, and other vertebrates. In mammals, testosterone is primarily secreted in the testes of males and the ovaries of females, although small amounts are also secreted by the adrenal glands. It is the principal male sex hormone and plays key roles in the development of reproductive tissues such as the testis and prostate, and in promoting secondary sexual characteristics such as increased muscle, bone mass, and body hair. In addition, testosterone is essential for health and well-being as well as the prevention of osteoporosis. Testosterone plays a significant role in glucose homeostasis and lipid metabolism. Cross-sectional epidemiological studies have reported a direct correlation between plasma testosterone and insulin sensitivity. Low testosterone levels are associated with an increased risk of type 2 diabetes, dramatically illustrated by androgen deprivation in men with prostate carcinoma.



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