Corticosterone ELISA kit
ADI-901-097

Highly sensitive corticosterone ELISA kit, species independent, used for animal stress research.

Product Number/Sizes
ADI-901-097  5x96 wells
Alternative size available: ADI-900-097 (1x96 wells)

- Sensitive measurement of Corticosterone, detecting as little as 27 pg/ml
- High throughput format with results in < 3 hours for up to 39 samples
- Broad dynamic range
- Species independent
- Routinely used to monitor stress levels in zoo animals
- Save with bulk kit package!

The Corticosterone EIA kit is a colorimetric competitive enzyme immunoassay kit with results in 3 hours. Absorbance is read at 405 nm. The Corticosterone EIA kit has low cross-reactivity with related steroids. The broad dynamic range makes this kit ideal for a wide variety of sample matrices from any species.

Product Specifications
SENSITIVITY: 27.0 pg/ml (range 32 - 20,000 pg/ml)
ASSAY TIME: 3 hours
APPLICATIONS: ELISA, Colorimetric detection
APPLICATION NOTES: For the quantitative determination of Corticosterone in culture supernatants, feces, plasma, serum, and saliva from any species. Cited sample types include cell lysate, urine and whole blood.
SPECIES REACTIVITY: Species independent
CROSSREACTIVITY: Corticosterone (100%), Deoxycorticosterone (21.3%), Desoxycorticosterone (21.0%), Progesterone (0.46%), Testosterone (0.31%), Tetrahydrocorticosterone (0.28%), Aldosterone (0.18%), Cortisol (0.046%) and <0.03%: Pregnenolone, Estradiol, Cortisone, 11-dehydrocorticosterone acetate.

SHIPPING: Blue Ice Not Frozen
LONG TERM STORAGE: +4°C

SCIENTIFIC BACKGROUND: Corticosterone is a glucocorticoid secreted by the cortex of the adrenal gland. Corticosterone is produced in response to the stimulation of the adrenal cortex by adrenocorticotropic hormone (ACTH) and is the precursor of aldosterone. Corticosterone production has been shown to increase with stress, with elevated corticosterone levels being associated with impairment of long term memory retrieval and following burn injury. In addition to stress levels, corticosterone is believed to play a decisive role in sleep-wake patterns.

TECHNICAL INFO/PRODUCT NOTES: For an overview of cited samples, please click here

PROTOCOL:
Suggested Small Volume Protocol for Serum/Plasma Samples

- Let all solutions come to room temp before use.
- Aliquot 10µl of each sample into microfuge tube.
- Make 1ml 1:100 Steroid Displacement Reagent (SDR) solution (immediately before use) in deionized water or PBS (not assay buffer)
- Add 10µl 1:100 SDR to each sample tube.
- Vortex, let stand >5 minutes before diluting with EIA buffer.
- Add 380µl EIA assay buffer to each plasma tube, vortex.

For Research Use Only, Not for Human
Final dilution is ~1:40 (This final dilution may not be appropriate for every sample; thus, optimal dilution must be determined by each end user for their experimental sample group.)


Assessing physiological and behavioural energetics as biomarkers of environmental change in seabirds G. Sorenson (2016)


Corticosterone may interact with peripheral development to shape adult resistance to social defeat M.S. Latsko, et al. Horm. Behav. 82 38 (2016)


Environmental enrichment protects against stress-induced anxiety: Role of glucocorticoid receptor, ERK, and CREB signaling in the basolateral amygdala L.S. Novaes, et al. Neuropharmacology 113 457 (2016)


Expansion of bone marrow adipose tissue during caloric restriction is associated with increased circulating glucocorticoids and not with hypothalamic W.P. Cathworm, et al. Endocrinology 157 508 (2016)


Glucocorticoids mediate acute high-fat diet induction of neuroinflammatory priming, the NLRP3 inflammasome, and the danger signal HMGB1 J.L. Sobesky, et al. eNeuro. 3 113 (2016)


Lever-derived ketone bodies are necessary for food anticipation R. Chavan, et al. Nat. Commun. 7 10580 (2016)


NRSF and CCR5 Established Neuron-glia Communication during Acute and Chronic Stresses H. Mou, et al. J. Drug Metab. Toxicol. 7 197 (2016)


Vibrissal paralysis produces increased corticosterone levels and impairment of spatial memory retrieval W.E. Patarroyo, et al. Behav Brain Res. **320** 58 (2016)


Comparison of Two LED Light Bulbs to a Dimmable CFL and their Effects on Broiler Chicken Growth, Stress, and Fear J.C. Huth & G.S. Archer Poult. Sci. **94** 2027 (2015)


In utero exposure of mice to diesel exhaust particles affects spatial learning and memory with reduced N-methyl-D-aspartate receptor expression in the hippocampus of male offspring S. Yokota, et al. Neurotoxicology 50 108 (2015)


Repeated exposure to stressful conditions can have beneficial effects on survival V. Marasco, et al. Exp. Gerontol. 69 170 (2015)


Social Isolation Disrupts Innate Immune Responses in both Male and Female Prairie Voles and Enhances Agonistic Behavior in Female Prairie Voles (Microtus ochrogaster) M.A. Scotti, et al. Horm. Behav. 70 7 (2015)


Physiological costs and carry-over effects of avian interspecific brood parasitism influence reproductive tradeoffs M.M. Mark & D.R. Rubenstein Horm. Behav. 63 717 (2013)


Periodic maternal separation decreases hippocampal neurogenesis without affecting basal corticosterone during the stress hyporesponsive period, but alters HPA axis and coping behavior in adulthood N. Lajud, et al. Psychoneuroendocrinology 37 410 (2012)


Restraint stress and repeated corticotropin-releasing factor receptor activation in the amygdala both increase amyloid-beta precursor protein and amyloid-beta peptide but have divergent effects on brain-derived neurotrophic factor and pre-synaptic proteins in the prefrontal cortex of rats B. Ray, et al. Neuroscience 184 139 (2011)


Lack of adrenomedullin in the mouse brain results in behavioral changes, anxiety, and lower survival under stress conditions A. Martinez, et al. PNAS 105 12581 (2008)

MCP-1-deficient mice show reduced neuroinflammatory responses and increased peripheral inflammatory responses to peripheral endotoxin insult L. Van, et al. J. Neuroinflammation 5 U1 (2008)


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