

# ACTH ELISA

FDA Cleared

## PITUITARY

### *Quantitative Measurement of ACTH*

**Pituitary: For the Diagnosis of Cushing's Syndrome, Addison's Disease, and Tumors of the Pituitary and Adrenal Glands.**

**Unique**

Advanced state-of-the-art technology - Direct label 2-site ELISA for reliability and convenience. 1-24 amino acid sequence specific enzyme conjugate as tag antibody. 34-39 sequence conjugated with biotin as capture antibody

**Accurate**

Excellent patient sample correlation vs. the IRMA Assay

**Simple**

Single step incubation and one washing step (2-site sandwich assay)

**High Sensitivity & Quantitative**

0.22 pg/mL analytical sensitivity

**Convenient**

Same-day Assay - 4-hour incubation for the sandwich assay + ½ hour reaction for the color development



**BIOMERICA**

## INTENDED USE

The Biomerica ACTH ELISA is a simple 4½ hour test for the *in vitro* quantitative determination of ACTH (Adrenocorticotrophic Hormone) levels in human plasma for the differential diagnosis of pituitary Cushing's disease, Addison's disease, autonomous ACTH producing pituitary tumors (e.g. Nelson's syndrome), hypopituitarism with ACTH deficiency and ectopic ACTH syndrome.

## BACKGROUND

ACTH (Adrenocorticotrophic hormone) or corticotropin is a 39-amino acid peptide hormone (MW=4500) secreted by the pituitary to regulate the production of steroid hormones by the adrenal cortex. ACTH increases the synthesis and release of all adrenal steroids, aldosterone, cortisol and adrenal androgens. It is the principal modulator of cortisol, the most important glucocorticoid in man. As the cortisol level in blood increases, release of ACTH is inhibited directly at the pituitary level. Through this same mechanism, decreasing cortisol levels lead to elevated ACTH levels.<sup>2,3,4,5</sup>

Plasma ACTH assays are useful in the differential diagnosis of pituitary Cushing's disease, Addison's disease, autonomous ACTH producing pituitary tumors (e.g. Nelson's syndrome), hypopituitarism with ACTH deficiency and ectopic ACTH syndrome.<sup>5,6,7,8,9,10</sup>

## PERFORMANCE

	<u>Assay Time:</u>	<u>Accuracy</u>	<u>Sensitivity</u>
ACTH:	4 1/2 hrs.	Biomerica ELISA = 1.02 - 1.58 pg/mL r = 0.995 N = 300	0.22 pg/mL

## ORDERING

<u>Catalog No.</u>	<u>Description</u>
7023	ACTH ELISA kit - Quantitative (96 tests)

 and EN ISO 13485:2003 Compliant, Multi-language inserts available

### Bibliography

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10. Krieger, D.T., A.S. Liotta, T. Suda, A. Goodgold, and E. Condon: Human Plasma Immunoreactive Lipotropin and Adrenocorticotropin in Normal Subjects and in Patients with Pituitary-Adrenal Disease, J. Clin. Endocrinol Metab. 48:566-571, 1979.



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