

ACTH

General:

ACTH (synonym corticotropin) is produced in the basophilic cells of the pituitary gland. The most important ACTH stimulating factor is CRH (corticotropin releasing hormone) formed in the hypothalamus. ACTH stimulates the synthesis of the steroidal hormones through feedback mechanisms in the suprarenal cortex (glucocorticoids, mineral corticoids and androgens.) The serum half-life is very short with 10 minutes.

Indication: Differential diagnosis of hypercortisolism, adrenal cortex insufficiency, suspicion of ectopic ACTH production (paraneoplastic)

Material: 2 ml EDTA-plasma frozen

Preanalytics: ACTH is unstable; blood collection in the morning preferred because of diurnal fluctuations of the ACTH level. Dispatch must be frozen!

TAT: same day, FML

Method: CLIA

Units: pg/ml

Ref.- range: 7.2 63.3

Note: ACTH concentrations vary physiologically; several blood collections in a short time span (e.g. 3 collections every 5 min.) result in a more exact interpretation.