



## Urinary Cortisol ELISA

### Steroid Hormones

**Competitive enzyme immunoassay for quantitative determination of free cortisol concentration in urine.**

Cortisol is a steroid hormone, released from the adrenal cortex, in response to the production of ACTH (adrenocorticotropic hormone) by the pituitary gland. It is involved in the response to stress. It increases blood pressure and blood sugar levels, it may cause infertility in women and it suppresses the immune system. Cortisol acts through specific intracellular receptors and has effects in numerous physiologic systems, including immune function, glucose-counter regulation, vascular tone, substrate utilisation and bone metabolism. Cortisol is excreted primarily in urine, in an unbound (free) form. Cortisol is bound, in plasma, from corticosteroid binding globulin (CBG, transcortin) with high affinity, and from albumin. Only free cortisol is available to most receptors. These normal endogenous functions are the basis for the physiological consequences of chronic stress. Prolonged cortisol secretion causes muscle wastage, hyperglycemia and suppresses the immune/inflammatory responses. The same consequences arise from long-term use of glucocorticoid drugs.

The free cortisol fraction represents the metabolically active cortisol and, in healthy patients, less than 1% is excreted in urine. In pathological conditions, such as Cushing's syndrome, free urinary cortisol levels are high because CBG does not bind to the excess plasmatic cortisol and is then excreted in urine. During pregnancy or estrogen-progestogen treatment there is an increase of plasmatic cortisol, caused by an increment of transport protein production, but free urinary cortisol levels result within normal range. It indicates correct adrenal functionality. This test is very useful to estimate the adrenal function because it measures the free cortisol (active form). The measurement of free urinary cortisol is the better parameter for Cushing's syndrome diagnosis.

### Features and benefits

- Unique ELISA assay
- Excellent correlation to LC/MS
- No sample pre-treatment required
- Long shelf life
- Ready to use reagents

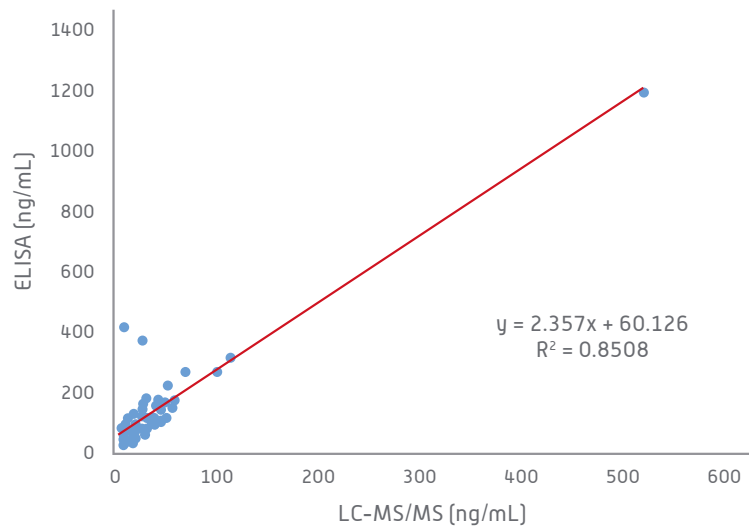
## Specifications

Format	ELISA
Calibrators	Ready To Use – 5 vials – 5 concentration levels
Controls	Ready To Use – 2 vials – 1 mL each (Low & High)
Assay Range	10-500 ng/mL
Sensitivity	2.95 ng/mL
Sample Volume	10 µL
Sample Type	Urine

## Method Comparison

### Urinary Cortisol ELISA vs LC/MS

64 samples were assessed with both Urinary Cortisol ELISA and LC/MS.



## Ordering information

Product Name	Description	Code
Urinary Cortisol ELISA	96 Wells	DK0018

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## Complementary Products

Product Name	Description	Code
Cortisol ELISA	96 Wells	DK0001
Cortisol Saliva ELISA	96 wells	DK0020