

DEV9966 Prolactin rat ELISA

The Prolactin rat ELISA is an enzyme-immunoassay for the quantitative measurement of rat prolactin.

Technology	: ELISA
Kit size	: 96
Sample material	: rat serum
Sample preparation	: -
Sample volume	: 25µl
Standard range	: 5-80 ng/ml
Incubation	: 2h (shaking), 1h (shaking), 30min at RT
Measuring system	: TMB 450nm
Sensitivity	: 0.6 ng/ml

Special remarks:

Rat prolactin (rPRL) is a single-chain polypeptide hormone of the rat anterior pituitary with a molecule mass of approximately 23,000. Prolactin from different species exhibits significant variations in the amino acid sequence. Rat prolactin differs from human prolactin at about 50 percent of all residues.

The secretion of rPRL from the pituitary is inhibited by hypothalamic prolactin-inhibitory factor (PIF). Although dopamine was long thought to be this PIF molecule, today it seems that there is a special peptide with prolactin-inhibiting activities.

The release of prolactin is certainly stimulated by different peptides, particularly thyrotropin releasing hormone (TRH) and vasoactive intestinal peptide (VIP). There is also evidence that rat posterior pituitary lobe contains a special prolactin releasing hormone.

The most important role of prolactin is stimulation of mammary gland growth and lactation. During pregnancy, blood prolactin levels climb, but the increases can differ enormously between rats. High prolactin levels are observed during lactation. Prolactin has a wide variety of other physiological actions, for example on the ovary. In the rat, prolactin has a luteotrophic effect which is not seen in many other species. Furthermore, prolactin is a stress hormone.

In rats, as in humans, prolactin exhibits a sleep-related diurnal variation. Peak values are seen in the late afternoon and nadir values in the morning.

Because of the variety of its actions, prolactin is one of the preferred hormones to monitor when testing the influence of new therapeutic agents and drugs on the endocrine system in the rat.

PLEASE NOTE: According to the respective ELISA a **Rat control-kit (Cat.-No. DEV99RC)** is available and can be used for internal quality control.

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