DATA SHEET

DEV9977 TSH rat ELISA

Enzyme immunoassay for the quantitative measurement of TSH in rat serum

Technology	: ELISA
Kit size	: 96
Sample material	: rat serum
Sample preparation	: -
Sample volume	: 25 µl
Standard range	: 2.5 - 80 ng/ml
Incubation	: 18-20h (4°C)
Measuring system	: TMB 450nm
Sensitivity	: 0.1 ng/ml

Special remarks:

Thyroid stimulating hormone (also known as thyrotropin or TSH) is a glycoprotein produced by the anterior pituitary gland. Through its action on the thyroid gland, it plays a major role in maintaining normal circulating levels of the iodothyronines, T4 and T3. The production and secretion of TSH is controlled on the one side by negative feedback from circulating T4 and T3, and on the other side by the hypothalamic thyrotropin-releasing hormone (TRH).

The TSH molecule is composed of two non-identical subunits, α and β, that are bound together in a noncovalent manner. Within a species, the TSH α unit is structurally identical to the α subunits of related glycoprotein hormones (LH, FSH). The β subunits of the related hormones are structurally hormone-specific and therefore determine their unique biological activities.

The mechanism controlling thyroid function in rats is exactly analogous to the mechanism operating in humans. This means that thyrotropin-releasing hormone stimulates the release of TSH from the pituitary gland as well as the serum concentrations of T4 and T3 influence the action of the pituitary gland.

This similarity between rat and human thyroid physiology makes the rat a very useful model for evaluating the effects of new drugs on thyrometabolic status.

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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