

Thyroid Stimulating Hormone ELISA Kit | TSH elisa kit

Thyroid Stimulating Hormone (TSH) ultra

CATALOG #
AAA77871

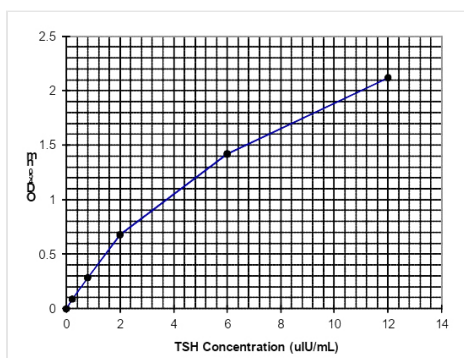
PRODUCT SYNONYMS

Thyroid Stimulating Hormone; Thyroid Stimulating Hormone (TSH) ultra; TSH elisa kit

PRODUCT SPECIFICATIONS

Specificity	This kit exhibits no detectable cross-reaction with human FSH, LH, Prolactin, or CG. hGH can be detected in this assay.
Sequence Length	1377
Assay Type	Quantitative Sandwich
Samples	Serum
Sensitivity	0.05 uIU/mL

IMAGES



Standard Curve (Sample)

ADDITIONAL INFORMATION

Related Product Information for TSH elisa kit	Background: The determination of serum or plasma levels of thyroid-stimulating hormone (TSH, or thyrotropin) is recognized as a sensitive method in the identification of primary and secondary hypothyroidism. Thyroid-stimulating hormone is secreted by the anterior lobe of the pituitary gland and induces the production and release of thyroxine and triiodothyronine from the thyroid gland. It is glycoprotein with a molecular weight of approximately 28,000 Dalton, consisting of two chemically different subunits, alpha and beta. Although the concentration of TSH in the blood is extremely low, it is essential for the maintenance of normal thyroid function. The release of TSH is regulated by a TSHreleasing hormone (TRH) produced by the hypothalamus. The levels of TSH and TRH are inversely related to the level of thyroid hormone. When there is a high level of thyroid hormone in the blood, less TRH is released by the hypothalamus, so less TSH is secreted by the pituitary. The opposite action will occur when there is decreased thyroid hormone in the blood. This process is known as a negative feedback mechanism and is responsible for maintaining the proper blood levels of these hormones. Conventional TSH assays are generally accepted as an important tool in the identification of primary and secondary hypothyroidism, but they offer limited clinical utility in the assessment of hyperthyroidism due to lack of sensitivity. This Ultra-sensitive TSH assay offers a sensitivity of 0.05 uIU/mL and hence allows discrimination between hyperthyroid and normal patient populations. TSH and the pituitary glycoproteins: luteinizing hormone (LH), follicle-stimulating hormone (FSH), and human chorionic gonadotropin (hCG) have identical alpha chains. The beta chain is distinct but does contain identical amino acid sequences, which can cause considerable cross-reactivity with some polyclonal TSH antisera. The use of monoclonal antibodies in this Ultra-sensitive Human TSH ELISA Kit eliminates this interference, which could result in falsely elevated TSH values in either menopausal or pregnant females, a population whose evaluation of thyroid status is clinically significant. Principle of the Assay: This ultra-sensitive TSH enzyme linked immunosorbent assay (ELISA) applies a technique called a quantitative sandwich immunoassay. The microtiter plate provided in this kit has been pre-coated with a monoclonal antibody specific for TSH. Standards or samples are then added to the microtiter plate wells and TSH, if present, will bind to the antibody precoated on the wells. In order to quantitate the amount of TSH present in the sample, a standardized preparation of horseradish peroxidase (HRP)-conjugated monoclonal antibody, specific for TSH are added to each well to "sandwich" the TSH immobilized on the plate. The microtiter plate undergoes incubation, and then the wells are thoroughly washed to remove all unbound components. Next, a TMB (3,3', 5,5' tetramethyl-benzidine) substrate solution is added to each well. The enzyme (HRP) and substrate are allowed to react over a short incubation period. Only those wells that contain TSH and enzymeconjugated antibody will exhibit a change in colour. The enzyme-substrate reaction is terminated by the addition of a sulphuric acid solution and the colour change is measured spectrophotometrically at a wavelength of 450 nm. In order to measure the concentration of TSH in the sample this Ultra-sensitive Human TSH ELISA Kit includes a set of calibration standards (6 standards). The calibration standards are assayed at the same time as the samples and allow the operator to produce a standard curve of Optical Density (O.D.) versus TSH concentration (uIU/mL). The concentration of TSH in the samples is then determined by comparing the O.D. of the samples to the standard curve. Intended Uses: This Ultra-sensitive Human TSH ELISA Kit is to be used for the in vitro quantitative determination of human thyroid stimulating hormone (TSH) concentrations in serum. This kit is intended FOR LABORATORY RESEARCH USE ONLY and not for use in test or therapeutic procedures.
Product Categories/Family for TSH elisa kit	ELISA Kits for Human Hormones

NCBI AND UNIPROT INFORMATION

NCBI GI #	469236
Molecular Weight	148,227 Da
NCBI Official Full Name	Tsh
UniProt Protein Name	Temperature-sensitive hemagglutinin tsh autotransporter
UniProt Gene Name	tsh
UniProt Entry Name	TSH_ECOLX

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

