

ARG80894 Human TSH ELISA Kit

Package: 96 wells
Store at: 4°C

Summary

Product Description	ARG80894 Human TSH ELISA Kit is an enzyme immunoassay kit for the quantification of TSH in serum and plasma (heparin).
Tested Reactivity	Hu
Tested Application	ELISA
Target Name	TSH / Thyroid Stimulating Hormone
Conjugation	HRP
Conjugation Note	Substrate: TMB and read at 450 nm
Sensitivity	0.06 mIU/l
Sample Type	Serum and plasma (heparin).
Standard Range	0.25 - 15 mIU/l
Sample Volume	25 µl
Alternate Names	FSH-alpha; LSH-alpha; FSHA; Thyrotropin alpha chain; LHA; CG-alpha; GPHA1; TSHA; Chorionic gonadotrophin subunit alpha; Luteinizing hormone alpha chain; TSH-alpha; Choriogonadotropin alpha chain; GPHA; CG-ALPHA; Anterior pituitary glycoprotein hormones common subunit alpha; Follitropin alpha chain; HCG; Glycoprotein hormones alpha chain; Thyroid-stimulating hormone alpha chain; Follicle-stimulating hormone alpha chain; Lutropin alpha chain

Application Instructions

Assay Time	10, 90, 20 min (RT)
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Properties

Form	96 well
Storage instruction	Store the kit at 2-8°C. Keep microplate wells sealed in a dry bag with desiccants. Do not expose test reagents to heat, sun or strong light during storage and usage. Please refer to the product user manual for detail temperatures of the components.
Note	For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

Database links	GeneID: 1081 Human Swiss-port # P01215 Human
Gene Symbol	CGA
Gene Full Name	glycoprotein hormones, alpha polypeptide
Background	Measurement of the serum concentration of thyrotropin (TSH), a glycoprotein with a molecular weight of 28,000 daltons and secreted from the anterior pituitary, is generally regarded as the most sensitive

indicator available for the diagnosis of primary and secondary (pituitary) hypothyroidism.

Increase in serum concentrations of TSH, which is primarily responsible for the synthesis and release of thyroid hormones, is an early and sensitive indicator of decrease thyroid reserve and in conjunction with decreased thyroxine (T4) concentrations is diagnostic of primary hypothyroidism. The expected increase in TSH concentrations demonstrates the classical negative feedback system between the pituitary and thyroid glands. That is, primary thyroid gland failure reduces secretion of the thyroid hormones, which in turn stimulates the release of TSH from the pituitary.

Additionally, TSH measurements are equally useful in differentiating secondary and tertiary (hypothalamic) hypothyroidism from the primary thyroid disease. TSH release from the pituitary is regulated by thyrotropin releasing factor (TRH), which is secreted by the hypothalamus, and by direct action of T4 and triiodothyronine (T3), the thyroid hormones, at the pituitary. Increase levels of T3 and T4 reduces the response of the pituitary to the stimulatory effects of TRH. In secondary and tertiary hypothyroidism, concentrations of T4 are usually low and TSH levels are generally low or normal.

Either pituitary TSH deficiency (secondary hypothyroidism) or insufficiency of stimulation of the pituitary by TRH (tertiary hypothyroidism) causes this. The TRH stimulation test differentiates these conditions. In secondary hypothyroidism, TSH response to TRH is blunted while a normal or delayed response is obtained in tertiary hypothyroidism.

Further, the advent of immunoenzymometric assays has provided the laboratory with sufficient sensitivity to enable the differentiating of hyperthyroidism from euthyroid population and extending the usefulness of TSH measurements. This method is a second-generation assay, which provide the means for discrimination in the hyperthyroid-euthyroid range.

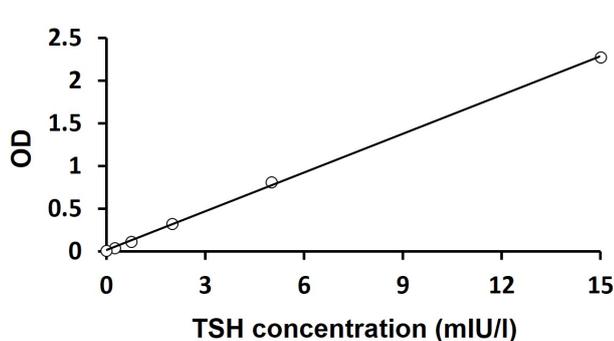
Highlight

Related products:
[TSH antibodies](#); [TSH ELISA Kits](#); [TSH Duos / Panels](#);
New ELISA data calculation tool:
[Simplify the ELISA analysis by GainData](#)

Research Area

Cancer kit; Metabolism kit; Neuroscience kit; Signaling Transduction kit

Images



ARG80894 Human TSH ELISA Kit standard curve image

ARG80894 Human TSH ELISA Kit results of a typical standard run with optical density reading at 450 nm.