

Human Thyroid Stimulating Hormone (TSH)

CATALOG NO:	P1031-2 P1031-10	2 µg 10 µg
ALTERNATE NAMES:	Glycoprotein hormones alpha chain, Anterior pituitary glycoprotein hormones common subunit alpha, Follicle-stimulating hormone alpha chain, FSH-alpha, Lutropin alpha chain, Luteinizing hormone alpha chain, LSH-alpha, Thyrotropin alpha chain, Thyroid-stimulating hormone alpha chain, TSH-alpha, Choriogonadotropin alpha chain, Chorionic gonadotrophin alpha subunit, CG-alpha, Thyrotropin subunit beta, Thyroid-stimulating hormone subunit beta, TSH-beta, TSH-B, Thyrotropin beta chain, Thyrotropin alfa.	
SOURCE:	Native, Isolated from human pituitary glands	
PURITY:	> 95% by SDS-PAGE	
FORM:	Freeze-dried powder	
FORMULATION:	Lyophilized from a concentrated (1.31mg/1ml) solution containing 50mM ammonium bicarbonate.	
RECONSTITUTION:	Reconstitute in sterile H ₂ O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.	
STORAGE CONDITIONS:	Stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution TSH should be stored at 4°C between 2-7 days and for future use below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA), avoid freeze-thaw cycles.	
DESCRIPTION	<p>Thyroid-stimulating hormone (also known as TSH or thyrotropin) is a hormone synthesized and secreted by thyrotrope cells in the anterior pituitary gland which regulates the endocrine function of the thyroid gland.</p> <p>TSH stimulates the thyroid gland to secrete the hormones thyroxine (T₄) and triiodothyronine (T₃). TSH production is controlled by a Thyrotropin Releasing Hormone, (TRH), which is manufactured in the hypothalamus and transported to the Anterior Pituitary gland, where it increases TSH production and release. Somatostatin is also produced by the hypothalamus, and has an opposite effect on the pituitary production of TSH, decreasing or inhibiting its release.</p> <p>The level of Thyroid hormones (T₃ and T₄) in the blood have an additional effect on the pituitary release of TSH, When the levels of T₃ and T₄ are low, the production of TSH is increased, and conversely, when levels of T₃ and T₄ are high, then TSH production is decreased. This effect creates a regulatory negative feedback loop.</p> <p>TSH is a glycoprotein and consists of two subunits, the alpha and the beta subunit.</p>	

The a (alpha) subunit is identical to that of human chorionic gonadotropin (HCG), luteinising hormone (LH), follicle-stimulating hormone (FSH). The b (beta) subunit is unique to TSH, and therefore determines its function.

BIOLOGICAL ACTIVITY: 9.3 IU/mg vial by Centaur CP.

RELATED PRODUCT:

- Thyroid Stimulating Hormone (human) ELISA Kit (**Cat. No. K7411-100**)
- Thyroid Peroxidase [TPO] IgG (human) ELISA Kit (**Cat. No. K5351-100**)
- PTHrP Antibody (**Cat. No. 5652-100**)
- Human Thyroglobulin (**Cat. No. P1025-20, -100**)

FOR RESEARCH USE ONLY! Not to be used on humans.