

Growth Hormone, High Sensitivity ELISA Kit | H-hGH elisa kit

Human Growth Hormone, High Sensitivity (H-hGH)

CATALOG #
AAA77866

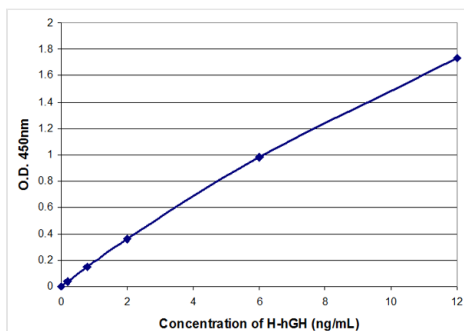
PRODUCT SYNONYMS

Growth Hormone; High Sensitivity; Human Growth Hormone; High Sensitivity (H-hGH); H-hGH elisa kit

PRODUCT SPECIFICATIONS

Specificity	This kit exhibits no detectable cross-reaction with LH, hCG, TSH, Prolactin, and FSH.
Sequence Length	217
Samples	Serum
Assay Type	Sandwich
Sensitivity	The minimal detectable concentration of hGH by this assay is estimated to be 0.1 ng/mL.
Intended Uses	This high-sensitivity Human Growth Hormone ELISA Kit is to be used for the in vitro quantitative determination of human growth hormone (hGH) concentrations in serum. This kit is intended FOR LABORATORY RESEARCH USE ONLY, and is not to be used in therapeutic procedures.

IMAGES



Standard Curve (Sample)

ADDITIONAL INFORMATION

Related Product Information for H-hGH elisa kit	Principle of the assay: This hGH enzyme linked immunosorbent assay (ELISA) applies a technique called a quantitative sandwich immunoassay. The microtiter plate provided in this kit has been precoated with a monoclonal antibody specific to hGH. Standards or samples are then added to the microtiter plate wells and incubated. After wash all wells, hGH if present, will bind to the antibody pre-coated on the wells. In order to quantitatively determine the amount of hGH present in the sample, a standardized preparation of horseradish peroxidase (HRP)-conjugated monoclonal antibody specific to hGH is added to each well to "sandwich" the hGH 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. This enzyme (HRP) and substrate are allowed to react over a short incubation period. Only those wells that contain hGH and enzyme-conjugated 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 hGH in the sample; this Human hGH 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 GH concentration (ng/mL). The concentration of hGH in the samples is then determined by comparing the O.D. of the samples to the standard curve. Background: Human growth hormone (GH) is a 22kDa monomeric protein produced and stored in somatotrophs in the anterior pituitary gland. GH is released from the pituitary into the bloodstream in a pulsatile manner under the regulatory control of hypothalamic somatostatin (SS) and GH-releasing factor (GHRF) [1]. The timing and frequency of GH release appears to be regulated by somatostatin, while the amplitude of GH release is determined by GHRF. A minor fraction (~10%) of GH in circulation exists in a smaller 20 kDa form [2]. GH has profound effects on tissue growth and metabolism, which is thought to be mediated through GH-dependent production of IGF-I and IGF-II, and their associated binding proteins. GH apparently stimulates IGF production after binding to specific cell surface receptors in the liver and, possibly, other tissues. Almost 50% of GH in circulation is bound to a high affinity GH binding protein (GHBP), which represents the extracellular domain of the GH receptor. Deficient GH secretion can occur in a number of clinical conditions [3]. However, evaluation of GH deficiency is complicated by the episodic nature of GH secretion and low circulating levels. A variety of physiologic and pharmacologic stimuli have been used to stimulate pituitary GH release during testing and failure to achieve a normal serum GH level in response to at least 2 GH stimulation or provocative tests is considered to be a of GH deficiency [4]. The definition of a normal serum GH response is controversial, although published values generally range from 5 to 10 ng/mL. GH excess (or acromegaly) can be caused either by direct GH hypersecretion or GH excess secondary to GHRF hypersecretion.
Product Categories/Family for H-hGH elisa kit	ELISA Kits for Human Hormones

NCBI AND UNIPROT INFORMATION

NCBI GI #	183157
NCBI GeneID	2688
Molecular Weight	20,201 Da
NCBI Official Full Name	growth hormone
NCBI Official Synonym Full Names	growth hormone 1
NCBI Official Symbol	GH1
NCBI Official Synonym Symbols	GH; GHN; GH-N; hGH-N; IGHD1B
NCBI Protein Information	somatotropin; pituitary growth hormone
UniProt Protein Name	Somatotropin
UniProt Gene Name	GH1
UniProt Entry Name	SOMA_HUMAN

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.

