

- Hormones
- Cardiac Markers
- Cancer Markers
- Human Proteins
- Enzymes & Related Biochemicals
- Sera, Plasma, & Infectious Agents

Chorionic Gonadotropin, Human (hCG)

Human Chorionic Gonadotropin (hCG) is a sialoglycoprotein hormone secreted by the trophoblastic cells of the placenta during pregnancy. hCG production increases shortly after implantation of the fertilized ovum in the uterine wall. Although its role in the female reproductive cycle is not clear, hCG is instrumental in the maintenance of the corpus luteum at the beginning of the gestation period.

Immunoassays for hCG serum levels are useful in the detection and/or verification of normal pregnancy, as elevated levels of hCG are reportedly detectable as early as seven days after conception. In addition, low levels of serum hCG may help diagnose ectopic pregnancy, while elevated levels of serum hCG have been reported in patients with trophoblastic disease, choriocarcinoma, and various other types of cancer.

hCG Antigen

Catalog Number	Purity (SDS-PAGE)	Activity (WHO 3rd IS 75/537)
C0714	99%	11,000 IU/mg
C0713	80%	9,000 IU/mg
C0711	15%	2,000 IU/mg

Source:	Human Pregnancy Urine
Form:	Lyophilized from Ammonium Bicarbonate
Protein/Content:	Total protein determined by Lowry (BSA standard) prior to lyophilization
Storage:	2-8°C short term -10°C to -25°C long term
Biohazard:	At a minimum, the above products are tested and found negative for HIV-1, HIV-2, Hepatitis B, and HCV. Other tests can be performed as needed.

hCG Antibodies

	Catalog Number	Purification Method
Goat anti hCG	GC079	Immunoaffinity chromatography
Monoclonal to hCG	MC077	Protein A chromatography

The above antibodies were raised to intact, whole-molecule hCG.

In addition, antibodies to α -hCG and β -hCG are listed on the hCG Subunits page in this section of our On-Line Product Guide.

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Chorionic Gonadotropin, Human

- Alpha-Subunit (α -hCG)
- Beta-Subunit (β -hCG)

Purified Human Chorionic Gonadotropin (hCG), cleaved chemically, will yield two dissimilar subunits, designated alpha (α -hCG) and beta (β -hCG). Taken separately, these hormonal subunits exhibit very little of the biological activity associated with whole molecule hCG. Each α -hCG subunit is virtually identical to the alpha subunits of follicle stimulating hormone (hFSH), luteinizing hormone (hLH), and thyroid stimulating hormone (hTSH). The biological activity of hCG is dependent on the distinct make-up of the β -hCG subunit, as compared to the β -subunit of other pituitary hormones. α -hCG exhibits an approximate molecular weight of 14500 Daltons, and β -hCG, 22200 Daltons.

α - and β -hCG Antigen

	Catalog Number	Purity (SDS-PAGE)	Subunit Contamination
α -hCG	C0814	98%	2% β -hCG
β -hCG	C0914	98%	2% α -hCG

Source: Human Pregnancy Urine
Form: Lyophilized from Ammonium Bicarbonate
Protein/Content: Determined by $A_{280}^{1\%} = 4.3$ (α -hCG) or 2.1 (β -hCG) prior to lyophilization
Storage: 2-8°C short term
 -10°C to -25°C long term
Biohazard: At a minimum, the above products are tested and found negative for HIV-1, HIV-2, Hepatitis B, and HCV. Other tests can be performed as needed.

α - and β -hCG Antibodies

	Catalog Number	Purification Method
Goat anti α -hCG	GC089	Immunoaffinity chromatography
	GC085	Ion-exchange chromatography
Goat anti β -hCG	GC099	Immunoaffinity chromatography
	GC095	Ion-exchange chromatography
Monoclonal to α -hCG	MC085	Ion-exchange chromatography
Monoclonal to β -hCG	MC097	Protein A chromatography
	MC095	Ion-exchange chromatography

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Follicle Stimulating Hormone, Human (hFSH)

Human Follicle Stimulating Hormone (hFSH) belongs to a subset of glycoprotein hormones, called gonadotropins, that regulate gonadal function. Secreted by the anterior pituitary gland, hFSH stimulates the growth and maturation of the ovarian follicles in women and stimulates spermatogenesis and the maturation of germ cells in men.

Immunoassays for hFSH serum levels, along with those for luteinizing hormone (hLH), are useful in the evaluation of disorders of reproduction and puberty, such as hypogonadism, ovulation timing, and infertility. In addition, hFSH and hLH serum levels are monitored in ovulation induction and in the clinical administration of gonadotropins.

hFSH Antigen

Catalog Number	Purity (SDS-PAGE)	Activity (WHO 2nd IRP 78/549)	Pituitary Hormone Contaminant Levels (w/w)
F0615	95%	5,000 IU/mg	0.1% hTSH, hLH, hGH, hPRL
F0614	75%	3,300 IU/mg	2.0% hTSH, hLH 1.0% hGH, hPRL
F0613	20%	1,000 IU/mg	Reported as assayed

Source:	Human Pituitary Glands
Form:	Lyophilized from Ammonium Bicarbonate
Protein/Content:	Total protein determined by Lowry (BSA standard) prior to lyophilization
Storage:	2-8°C short term -10°C to -25°C long term
Biohazard:	At a minimum, the above products are tested and found negative for HIV-1, HIV-2, Hepatitis B, and HCV. Other tests can be performed as needed.

hFSH Antibodies

Antibodies to hFSH are listed on the hFSH Subunits page in this section of our On-Line Product Guide.

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Follicle Stimulating Hormone, Human

- Alpha-Subunit (α -hFSH)
- Beta-Subunit (β -hFSH)

Purified Human Follicle Stimulating hormone (hFSH), cleaved chemically, will yield two dissimilar subunits, designated alpha (α -hFSH) and beta (β -hFSH). Taken separately, these hormonal subunits exhibit very little of the biological activity associated with whole molecule hFSH. Each α -hFSH subunit is virtually identical to the alpha subunits of chorionic gonadotropin (hCG), luteinizing hormone (hLH), and thyroid stimulating hormone (hTSH). The biological activity of hFSH is dependent on the distinct make-up of the β -hFSH subunit, as compared to the β -subunit of other pituitary hormones. α -hFSH exhibits an approximate molecular weight of 13,500 Daltons, and β -hFSH, 20,500 Daltons.

α - and β -hFSH Antigen

	Catalog Number	Purity (SDS-PAGE)
α -hFSH	F0714	95%
β -hFSH	F0814	95%

Source: Human Pituitary Glands
 Form: Lyophilized powder
 Protein/Content: Total protein determined prior to lyophilization
 Storage: 2-8°C short term
 -10°C to -25°C long term
 Biohazard: At a minimum, the above products are tested and found negative for HIV-1, HIV-2, Hepatitis B, and HCV. Other tests can be performed as needed.

β -hFSH Antibodies

	Catalog Number	Purification Method
Rabbit anti β -hFSH	RF089	Immunoaffinity chromatography
Monoclonal to β -hFSH	MF085	Ion-exchange chromatography

For antibodies to α -hFSH, please refer to the monoclonal and polyclonal antibodies to α -hCG, listed on the hCG Subunits page in this section of our On-Line Product Guide.

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Growth Hormone, Human (hGH)

Human Growth Hormone (hGH) is the most prevalent hormone in the human anterior pituitary gland. It, like prolactin, is a non-glycosylated, single polypeptide chain. Excessive secretion of hGH, called hypersomatotropism, is often associated with liver and kidney disease and with acromegaly. hGH deficiency, called hyposomatotropism, is associated with several types of dwarfism and with various pituitary or hypothalamic afflictions. Immunoassays for hGH serum levels are useful in the detection of hyposomatotropism and hypersomatotropism and in monitoring the treatment of related afflictions.

<u>Catalog Number</u>	<u>Purity (SDS-PAGE)</u>	<u>Activity (WHO 1st IS 80/505)</u>	<u>Pituitary Hormone Contaminant Levels (w/w)</u>
G0715	98%	Reported as assayed	1.0% hFSH, hLH, hPRL, hTSH
G0714	70%	Reported as assayed	1.0% hFSH, hLH, hPRL, hTSH

Source: Human Pituitary Glands
Form: Lyophilized from Ammonium Bicarbonate
Protein/Content: Total protein determined prior to lyophilization
Storage: 2-8°C short term
 -10°C to -25°C long term
Biohazard: At a minimum, the above products are tested and found negative for HIV-1, HIV-2, Hepatitis B, and HCV. Other tests can be performed as needed.

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Lactogen, Human Placental (hPL)

The human placenta produces several hormones that are homologous to hormones of the anterior pituitary. Human Placental Lactogen (hPL), a single polypeptide chain of 190 amino acid residues, is structurally similar to both human prolactin and growth hormone. Not surprisingly, hPL demonstrates both lactogenic and growth-stimulating activity.

hPL serum levels rise very early in normal pregnancy and continue to increase until a plateau is reached at approximately the 35th week post-conception. As such, immunoassays for maternal serum levels of hPL are useful in monitoring placental function. In addition, serum elevations of hPL in non-pregnant individuals are associated with various malignancies.

hPL Antigen

	Catalog Number	Purity (SDS-PAGE)
	L0114	95%
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Source:	Human Placenta	
Form:	Lyophilized from Ammonium Bicarbonate	
Protein/Content:	Determined by $A_{280}^{1\%} = 9.0$ prior to lyophilization	
Storage:	2-8°C short term -10°C to -25°C long term	
Biohazard:	At a minimum, the above products are tested and found negative for HIV-1, HIV-2, Hepatitis B, and HCV. Other tests can be performed as needed.	

hPL Antibodies

	Catalog Number	Purification Method
Monoclonal to hPL	ML015	Ion-exchange chromatography

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Luteinizing Hormone, Human (hLH)

Human Luteinizing Hormone (hLH) belongs to a subset of glycoprotein hormones, called gonadotropins, that regulate gonadal function. Secreted by the anterior pituitary gland, hLH stimulates testosterone secretion from Leydig cells in men, and stimulates the ovarian theca to produce several androgen precursors of estradiol, then promotes the formation of the corpus luteum and the subsequent production of progesterone in women.

Immunoassays for hLH serum levels, along with those for follicle stimulating hormone (hFSH), are useful in the evaluation of disorders of reproduction and puberty, such as hypogonadism, ovulation timing, and infertility. In addition, hLH and hFSH serum levels are monitored in ovulation induction and in the clinical administration of gonadotropins.

hLH Antigen

Catalog Number	Purity (SDS-PAGE)	Activity (WHO 1st IRP 68/40)	Pituitary Hormone Contaminant Levels (w/w)
L0815	98%	12,000 IU/mg	0.1% hFSH, hGH, hPRL, hTSH
L0814	95%	9,000 IU/mg	1.0% hFSH, hTSH 0.5% hGH, hPRL
L0813	50%	5,000 IU/mg	Reported as assayed

Source: Human Pituitary Glands
 Form: Lyophilized from Ammonium Bicarbonate
 Protein/Content: Total protein determined by Lowry (BSA standard) prior to lyophilization
 Storage: 2-8°C short term
 -10°C to -25°C long term
 Biohazard: At a minimum, the above products are tested and found negative for HIV-1, HIV-2, Hepatitis B, and HCV. Other tests can be performed as needed.

hLH Antibodies

Antibodies to hLH are listed on the hLH Subunits page in this section of our On-Line Product Guide.

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Luteinizing Hormone, Human

- Alpha-Subunit (α -hLH)
- Beta-Subunit (β -hLH)

Purified Human Luteinizing Hormone (hLH), cleaved chemically, will yield two dissimilar subunits, designated alpha (α -hLH) and beta (β -hLH). Taken separately, these hormonal subunits exhibit very little of the biological activity associated with whole molecule hLH. Each α -hLH subunit is virtually identical to the alpha subunits of chorionic gonadotropin (hCG), follicle stimulating hormone (hFSH), and thyroid stimulating hormone (hTSH). The biological activity of hLH is dependent on the distinct make-up of the β -hLH subunit, as compared to the β -subunit of other pituitary hormones.

α -hLH exhibits an approximate molecular weight of 13,500 Daltons, and β -hLH, 14,500 Daltons.

α - and β -hLH Antigen

	Catalog Number	Purity (SDS-PAGE)
α -hLH	L0914	95%
β -hLH	L1014	95%

Source: Human Pituitary Glands
 Form: Lyophilized powder
 Protein/Content: Not determined
 Storage: 2-8°C short term
 -10°C to -25°C long term
 Biohazard: At a minimum, the above products are tested and found negative for HIV-1, HIV-2, Hepatitis B, and HCV. Other tests can be performed as needed.

β -hLH Antibodies

	Catalog Number	Purification Method
Goat anti β -hLH	GL109	Immunoaffinity chromatography
Monoclonal to β -hLH	ML105	Ion-exchange chromatography

For antibodies to α -hLH, please refer to the monoclonal and polyclonal antibodies to α -hCG, listed on the hCG Subunits page in this section of our On-Line Product Guide.

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Prolactin, Human (hPRL)

Human Prolactin (hPRL) is secreted by the anterior pituitary gland and, like growth hormone, is a non-glycosylated, single polypeptide chain. Its primary function is the development and maintenance of lactation. Serum levels of hPRL elevate after approximately the eighth week of pregnancy and continue to rise until term.

Elevated serum levels of hPRL are associated with infertility in men and women, male impotence, and primary hypothyroidism. In addition, abnormal hPRL serum levels in women have been associated with several clinical conditions: galactorrhea, anovulation with amenorrhea, hypoenestrogenism, and hyperprolactinaemia. As such, immunoassays for hPRL serum levels are useful in the detection and monitoring of these disorders.

hPRL Antigen

Catalog Number	Purity (SDS-PAGE)	Activity (WHO 3rd IS 84/500)	Pituitary Hormone Contaminant Levels (w/w)
P1516	95%	30 IU/mg	None, recombinant product
P1515	95%	Reported as assayed	None, recombinant product
P0415	95%	30 IU/mg	0.5% hFSH, hLH, hTSH 1.0% hGH
P0414	50%	12 IU/mg	Reported as assayed

Source	
P1516:	<i>E. coli</i> strain BL21(DE3)ply.S
P1515:	<i>E. coli</i> strain JM109
P0415 & P0414:	Human Pituitary Glands
Form:	Lyophilized from Ammonium Bicarbonate
Protein/Content:	Total protein determined by Bio-Rad and/or Bradford prior to lyophilization
Storage:	2-8°C short term -10°C to -25°C long term
Biohazard:	At a minimum, the above products are tested and found negative for HIV-1, HIV-2, Hepatitis B, and HCV. Other tests can be performed as needed.

hPRL Antibodies

	Catalog Number	Purification Method
Goat anti rec. hPRL	GP159	Immunoaffinity chromatography
Goat anti rec. hPRL	GP155	Ion-exchange chromatography
Rabbit anti hPRL	RP049	Immunoaffinity chromatography
Monoclonal to hPRL	MP045	Ion-exchange chromatography

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Thyroid Stimulating Hormone, Human (hTSH)

Human Thyroid Stimulating Hormone (hTSH), secreted by the anterior pituitary gland is a major regulating factor of thyroid hormone synthesis and secretion. It stimulates the thyroid to synthesize and release the thyroid hormones triiodothyronine (T3) and thyroxine (T4), and induces thyroglobulin production.

Serum levels of hTSH, T3, and T4 are routinely used as indicators of thyroid function. In hyperthyroid syndromes such as thyroid adenoma, nodular goiter, and the autoimmune disorder Graves' disease, hTSH serum levels are frequently well below normal, while T3 and T4 are elevated. Most cases of hypothyroidism are due to another autoimmune disease, Hashimoto's thyroiditis, in which hTSH synthesis is increased and serum levels are high, while T3 and T4 serum levels are low.

hTSH Antigen

Catalog Number	Purity (SDS-PAGE)	Activity (WHO 2nd IRP 80/558)	Pituitary Hormone Contaminant Levels (w/w)
T0115	95%	6.2 IU/mg	0.1% hFSH, hGH, hLH, hPRL
T0114	90%	5 IU/mg	2.0% hFSH, hLH, hGH 1.0% hPRL
T0113	20%	1.5 IU/mg	Reported as assayed

Source: Human Pituitary Glands
 Form: Lyophilized from Ammonium Bicarbonate
 Protein/Content: Total protein determined by Lowry (BSA standard) prior to lyophilization
 Storage: 2-8°C short term
 -10°C to -25°C long term
 Biohazard: At a minimum, the above products are tested and found negative for HIV-1, HIV-2, Hepatitis B, and HCV. Other tests can be performed as needed.

hTSH Antibodies

Antibodies to hTSH are listed on the hTSH Subunits page in this section of our On-Line Product Guide.

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Thyroid Stimulating Hormone, Human

- Alpha-Subunit (α -hTSH)
- Beta-Subunit (β -hTSH)

Purified Human Thyroid Stimulating Hormone (hTSH), cleaved chemically, will yield two dissimilar subunits, designated alpha (α -hTSH) and beta (β -hTSH). Taken separately, these hormonal subunits exhibit very little of the biological activity associated with whole molecule hTSH. Each α -hTSH subunit is virtually identical to the alpha subunits of chorionic gonadotropin (hCG), follicle stimulating hormone (hFSH), and luteinizing hormone (hLH). The biological activity of hTSH is dependent on the distinct make-up of the β -hTSH subunit, as compared to the β -subunit of other pituitary hormones. α -hTSH exhibits an approximate molecular weight of 13500 Daltons, and β -hTSH, 15000 Daltons.

α - and β -hTSH Antigen

	Catalog Number	Purity (SDS-PAGE)
α -hTSH	T0214	90%
β -hTSH	T0314	90%

Source: Human Pituitary Glands
 Form: Lyophilized powder
 Protein/Content: Reported as assayed
 Storage: 2-8°C short term
 -10°C to -25°C long term
 Biohazard: At a minimum, the above products are tested and found negative for HIV-1, HIV-2, Hepatitis B, and HCV. Other tests can be performed as needed.

β -hTSH Antibodies

	Catalog Number	Purification Method
Goat anti β -hTSH	GT039	Immunoaffinity chromatography
	GT035	Ion-exchange chromatography
Monoclonal to β -hTSH	MT035	Ion-exchange chromatography

For antibodies to α -hTSH, please refer to the monoclonal and polyclonal antibodies to α -hCG, listed on the hCG Subunits page in this section of our On-Line Product Guide.

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