

Chorionic Gonadotropin (Human)

[Targets \(1\)](#)[Biointeractions \(1\)](#)

IDENTIFICATION

Name

Chorionic Gonadotropin (Human)

Accession Number

DB09126

Type

Biotech

Groups

Approved, Vet approved

Biologic Classification

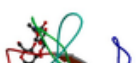
Protein Based Therapies
Hormones

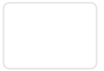
Description

Human chorionic gonadotropin (HCG), a polypeptide hormone produced by the human placenta. Endogenously produced HCG interacts with the LHCG receptor of the ovary and promotes the maintenance of the corpus luteum during the beginning of pregnancy. This allows the corpus luteum to continuously secrete the hormone progesterone during the first trimester, which is required for maintenance of the uterus and prevents menstruation. In males, HCG also stimulates the production of gonadal steroid hormones by stimulating the interstitial cells (Leydig cells) of the testis to produce androgens.

HCG is composed of an alpha and a beta sub-unit. The alpha sub-unit is essentially identical to the alpha sub units of the human pituitary gonadotropins, luteinizing hormone (LH) and follicle-stimulating hormone (FSH), as well as to the alpha sub-unit of human thyroid-stimulating hormone (TSH), while the beta sub units of these hormones differ in amino acid sequence. As a drug product, chorionic gonadotropin is a highly purified pyrogen-free preparation obtained from the urine of pregnant females.

Protein structure



**Protein chemical formula**

Not Available

Protein average weight

Not Available

Sequences

```
>Alpha Chain
APDVQDCPECTLQENPFFSQPGAPILQCMGCCFSRAYPTPLRSKKTMLVQKNVTSESTCC
VAKSYNRVTVMGGFKVENHTACHCSTCYHKS
```

```
>Beta Chain
SKEPLRPRCPINATLAVEKEGCPVCITVNTTICAGYCPMTRVLQGVLPALPQVVCNYR
DVRFESIRLPGCPRGVNPVVSYAVALSCQCALCRRSTTDCGGPKDHPLTCDDPRFQDSSS
SKAPPPSLPSPSRLPGSDTPILPQ
```

[Download FASTA Format](#)**Synonyms**

Chorionic gonadotrophin

Chorionic gonadotropin

Gonadotropin, Chorionic

Gonadotropin,chorionic

h-HCG

hCG

Human chorionic gonadotropin

Human menopausal gonadotropin

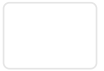
Human menopausal gonadotropin (urine derived)

Human-chorionic gonadotropin

Urinary hCG

Prescription Products

NAME	DOSAGE	STRENGTH	ROUTE	LABELLER	MARKETING START	MARKETING END		
Apl Inj 1000 lu/ml	Liquid	1000 unit	Intramuscular	Ayerst Laboratories	1951-12-31	2000-08-02		



USP								
Novarel	Kit	10000 [USP'U]/1		Ferring Pharmaceuticals Inc.	1974-01-15	Not applicable		
Novarel	Kit	5000 [USP'U]/1		Ferring Pharmaceuticals Inc.	1974-01-15	Not applicable		
Profasi Hp Inj 10000unit/vial USP	Powder, for solution	10000 unit	Intramuscular	Pharmascience Inc	1984-12-31	2009-04-29		

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Mixture Products

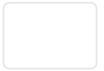
Search

NAME	INGREDIENTS	DOSAGE	ROUTE	LABELLER	MARKETING START	MARKETING END			
A.P.L. - Pws-liq	Chorionic Gonadotropin (Human) (10000 unit) + Water (10 ml)	Liquid; Powder, for solution	Intramuscular	Wyeth Ayerst Canada Inc.	1998-11-11	2001-06-01			
Pregnyl	Chorionic Gonadotropin (Human) (10000 unit) + Water (10 ml)	Kit; Liquid; Powder, for solution	Intramuscular	Merck Ltd.	1997-08-13	Not applicable			
Profasi Hp 10000	Chorionic Gonadotropin (Human) (10000 unit) + Water (10 ml)	Kit; Liquid; Powder, for solution	Intramuscular; Subcutaneous	Emd Serono, A Division Of Emd Inc., Canada	1991-12-31	2007-05-07			

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Categories[Amino Acids, Peptides, and Proteins](#)[Genito Urinary System and Sex Hormones](#)[Gonadotropins](#)[Hormones](#)[Hormones, Hormone Substitutes, and Hormone Antagonists](#)



[Pregnancy Proteins](#)

[Proteins](#)

[Reproductive Control Agents](#)

[Sex Hormones and Modulators of the Genital System](#)

UNII

[20ED16GHEB](#)

CAS number

9002-61-3

PHARMACOLOGY

Indication

For the treatment of prepubertal cryptorchidism (not due to anatomical obstruction), for the treatment of selected cases of hypogonadotropic hypogonadism (hypogonadism secondary to a pituitary deficiency) in males and for the induction of ovulation and pregnancy in the anovulatory, infertile woman in whom the cause of anovulation is secondary and not due to primary ovarian failure, and who has been appropriately pretreated with human menotropins.

Associated Conditions

[Idiopathic Hypogonadotropic Hypogonadism](#)

[Undescended Testis](#)

[Secondary Hypogonadotropic hypogonadism](#)

Associated Therapies

[Ovulation induction therapy](#)

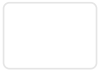
[Stimulation of spermatogenesis therapy](#)

Pharmacodynamics

The action of HCG is virtually identical to that of pituitary LH, although HCG appears to have a small degree of FSH activity as well. It stimulates production of gonadal steroid hormones by stimulating the interstitial cells (Leydig cells) of the testis to produce androgens and the corpus luteum of the ovary to produce progesterone.

Mechanism of action

 [Lutropin-choriogonadotropic hormone receptor](#)

**Absorption**

Not Available

Volume of distribution

Not Available

Protein binding

Not Available

Metabolism

Not Available

Route of elimination

Not Available

Half life

Not Available

Clearance

Not Available

Toxicity

Not Available

Affected organisms

Not Available

Pathways

Not Available

Pharmacogenomic Effects/ADRs ⓘ

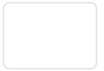
Not Available

INTERACTIONS**Drug Interactions** ⓘ

Not Available

Food Interactions

Not Available



Not Available

External Links

KEGG Drug

[D06457](#)

PubChem Substance

[347910414](#)

ChEBI

[81570](#)

ChEMBL

[CHEMBL1201509](#)

RxList

[RxList Drug Page](#)

Drugs.com

[Drugs.com Drug Page](#)

Wikipedia

[Human_chorionic_gonadotropin](#)

ATC Codes

[G03GA01](#) — Chorionic gonadotrophin

- [G03GA](#) — Gonadotropins
- [G03G](#) — GONADOTROPINS AND OTHER OVULATION STIMULANTS
- [G03](#) — SEX HORMONES AND MODULATORS OF THE GENITAL SYSTEM
- [G](#) — GENITO URINARY SYSTEM AND SEX HORMONES

AHFS Codes

68:18.00 — Gonadotropins

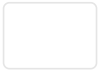
FDA label

[Download](#) (26.7 KB)

CLINICAL TRIALS

Clinical Trials ⓘ

PHASE	STATUS	PURPOSE	CONDITIONS	COUNT
0	Completed	Basic Science	Polycystic Ovaries Syndrome	1



1, 2	Completed	Treatment	Healthy Males	1
1, 2	Completed	Treatment	HCG	1
1, 2	Suspended	Supportive Care	Graft Versus Host Disease (GVHD)	1
1, 2	Unknown Status	Treatment	Assisted Reproductive Technology therapy	1
2	Completed	Treatment	Assisted Reproductive Technology therapy / Infertilities	1
2	Completed	Treatment	Infertilities	1
2	Not Yet Recruiting	Treatment	Anovulatory cycle / Polycystic Ovaries Syndrome	1

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PHARMACOECONOMICS

Manufacturers

Not Available

Packagers

Not Available

Dosage forms

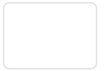
FORM	ROUTE	STRENGTH
Liquid; powder, for solution	Intramuscular	
Liquid	Intramuscular	1000 unit
Powder, for solution	Intramuscular; Subcutaneous	10000 unit
Kit		10000 [USP ^U]/1
Kit		5000 [USP ^U]/1
Kit; liquid; powder, for solution	Intramuscular	
Kit; liquid; powder, for solution	Intramuscular; Subcutaneous	
Powder, for solution	Intramuscular	10000 unit

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Prices

Not Available



PATENT NUMBER	↕	PEDIATRIC EXTENSION	↕	APPROVED	↕	EXPIRES (ESTIMATED)	↕	↕
US6706681		No		2004-03-16		2021-03-16		

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PROPERTIES

State

Solid

Experimental Properties

Not Available

TAXONOMY

Description

Not Available

Kingdom

Organic Compounds

Super Class

Organic Acids

Class

Carboxylic Acids and Derivatives

Sub Class

Amino Acids, Peptides, and Analogues

Direct Parent

Peptides

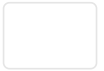
Alternative Parents

Not Available

Substituents

Not Available

Molecular Framework



Not Available

TARGETS

1. Lutropin-choriogonadotropic hormone receptor

Kind

Protein

Organism

Human

Pharmacological action

Yes

Actions

Ligand

General Function

Luteinizing hormone receptor activity

Specific Function

Receptor for lutropin-choriogonadotropic hormone. The activity of this receptor is mediated by G proteins which activate adenylate cyclase.

Gene Name

LHCGR

Uniprot ID

[P22888](#)

Uniprot Name

Lutropin-choriogonadotropic hormone receptor

Molecular Weight

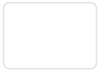
78642.01 Da

Drug created on September 23, 2015 10:50 / Updated on November 25, 2018 21:23

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