

Recombinant Human Placental Lactogen

Cat. No. CSH1-184H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant human placental lactogen produced in E. coli is one polypeptide chain containing 199 amino and an additional Ala at N-terminus acids and having a molecular mass of 22.4 kDa. It was purified by proprietary chromatographic techniques.
Species	Human
Source	E.coli
Description	Human placental lactogen (HPL), also called human chorionic somatomammotropin, is a polypeptide placental hormone. Its structure and function is similar to that of human growth hormone. It modifies the metabolic state of the mother during pregnancy to facilitate the energy supply of the fetus. HPL has anti-insulin properties.
Amino Acid Sequence	The sequence of the first six N-terminal amino acids was determined and was found to be Ala-Val-Gln-Thr-Val-Pro.
Physical Appearance	White lyophilized (freeze-dried) powder.
Purity	Greater than 99.0% as determined by: (a) Gel filtration analysis. (b) Analysis by reducing and non-reducing SDS-PAGE gel.
Formulation	The protein was lyophilized from a concentrated (1mg/ml) solution with 0.02-0.03% NaHCO ₃ .

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Solubility	It is recommended to reconstitute the lyophilized hPL in sterile water or 0.4% NaHCO ₃ adjusted to pH 8-9, not less than 100g/ml, which can then be further diluted to other aqueous solutions, preferably in presence of carrier protein.
Endotoxin	Less than 0.05 ng/g (0.5 EU/g) of hPL.
Protein Content	Protein quantitation was carried out by UV spectroscopy at 280 nm using the absorbency value of 0.73 as the extinction coefficient for a 0.1% (1mg/ml) solution at pH 8.0. This value is calculated by the DNAMAN computer analysis program of protein sequences.
Dimers And Aggregates	The purified hPL consists of > 97% monomers as determined by gel-filtration chromatography.
Biological Activity	hPL is fully biologically active as evidenced by inducing proliferation of Nb2 cells.
Stability	Lyophilized hPL although stable at room temperature for several weeks, should be stored desiccated below -18°C. Upon reconstitution at > 0.1 hPL mg/ml and up to 4 mg/ml and filter sterilization hPL can be stored at 4 °C for several weeks.

GENE INFORMATION

Gene Name	CSH1 chorionic somatomammotropin hormone 1 (placental lactogen) [Homo sapiens]
Synonyms	chorionic somatomammotropin hormone 1 (placental lactogen); PL; CSA; CSH2; CSMT; FLJ75407; CSH1; chorionic somatomammotropin hormone; chorionic somatomammotropin A; placental lactogen; choriomammotropin; lactogen; hCS-A; CS-1; Choriomammotropin; Lactogen; chorionic somatomammotropin hormone 1
Gene ID	1442

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mRNA Refseq	NM_001317
Protein Refseq	NP_001308
MIM	150200
UniProt ID	P01243
Chromosome Location	17q24.2
Pathway	Cytokine-cytokine receptor interaction; Jak-STAT signaling pathway; Neuroactive ligand-receptor interaction
Function	hormone activity; metal ion binding

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