

# Recombinant Caprine Placental Lactogen

**Cat. No.** PL-51C    **Lot. No.** (See product label)

## SPECIFICATION

|                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
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| <b>Product Overview</b>    | Recombinant Caprine Placental Lactogen, is a single polypeptide chain containing 199 amino acids and an additional Ala at the N-terminus having a molecular mass of 23 kDa. Placental Lactogen is purified by proprietary chromatographic techniques.                                                                                                                                                                                                                                                                                                                     |
| <b>Species</b>             | Goat                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Source</b>              | E.coli                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Description</b>         | Placental Lactogen is a polypeptide hormone that is produced by the Syncytiotrophoblasts of the Placenta, also known as chorionic somatomammotropin. It has both Growth Hormone and Prolactin activities on growth, lactation, and luteal steroid production. In women, placental lactogen secretion begins soon after implantation and increases to 1 g or more a day in late pregnancy. Placental lactogen is also an insulin antagonist. Placental Lactogen Goat is also capable of activating human and other heterologous GH receptors but not ruminat GH receptors. |
| <b>Physical Appearance</b> | Sterile Filtered White lyophilized (freeze-dried) powder.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Purity</b>              | Greater than 98.0% as determined by: (a) Analysis by RP-HPLC. (b) Analysis by SDS-PAGE.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Formulation</b>         | The protein was lyophilized from a concentrated (1mg/ml) solution with 0.02-0.03% NaHCO <sub>3</sub> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Solubility</b>          | It is recommended to reconstitute the lyophilized Placental Lactogen in sterile 18 MΩ-                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

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|                            | cm H <sub>2</sub> O not less than 100 g/ml, which can then be further diluted to other aqueous solutions.                                                                                                                                                                                                                                                            |
| <b>Amino acid sequence</b> | The sequence of the first four N-terminal amino acids was determined and was found to be Ala-Glu-Asn-Tyr.                                                                                                                                                                                                                                                            |
| <b>Biological Activity</b> | Caprine Placental Lactogen is biologically active as evidenced by inducing proliferation of Nb2 cells.                                                                                                                                                                                                                                                               |
| <b>Protein content</b>     | UV spectroscopy at 280 nm using the absorbency value of 0.85 as the extinction coefficient for a 0.1% (1mg/ml) solution. This value is calculated by the PC GENE computer analysis program of protein sequences (IntelliGenetics).                                                                                                                                   |
| <b>Storage</b>             | Lyophilized Placental Lactogen although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution Placental Lactogen Goat 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). Please prevent freeze-thaw cycles. |

## GENE INFORMATION

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| <b>Synonyms</b> | Chorionic Somatomammotropin Hormone 1; CSH1; CSB; CS-1; hCS-B; BPL; BPLP-I; chorionic somatomammotropin hormone 1 (placental lactogen); PL; CSA; CSMT; FLJ75407; hCS-A; choriomammotropin; placental lactogen; chorionic somatomammotropin A; Lactogen; omammotropin A. |
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