Product Information

**Prolactin human**
recombinant, expressed in Escherichia coli
BioReagent, suitable for cell culture

Catalog Number L4021

**Synonym: Luteotropic Hormone**

**Product Description**

Prolactin is from a DNA sequence encoding the mature human prolactin sequence, amino acids 29-227, and expressed in Escherichia coli. The 200 amino acid residue methionyl form of recombinant human prolactin has a predicted molecular mass of ~24 kDa.

Prolactin is a lactogenic hormone that plays a role in breast cancer, regulation of reproductive function, and immunoregulation. Prolactin cDNA encodes a 227 amino acid residue protein with a putative 28 amino residue signal peptide. Removal of the signal peptide results in the mature hormone corresponding to amino acids 29-227 of natural prolactin. There are several natural occurring molecular forms of prolactin, including a monomer, a non-glycosylated form, and a glycosylated form.

Prolactin is a neuroendocrine hormone that is synthesized by the anterior pituitary, placenta, brain, uterus, dermal fibroblasts, decidua, B cells, T cells, NK cells and breast cancer cells. In the immune system, prolactin, acting as a proliferative growth factor, is secreted by human PBMC. Also, treating human PBMC with prolactin enhances production of IFNγ. Prolactin signal transduction involves the JAK/STAT families and Src kinase family.

The prolactin receptor is a transmembrane type 1 glycoprotein that belongs to the cytokine hematopoietic receptor family. A large number of cells and organs express prolactin receptor, including B cells, T cells, macrophages, monocytes, neutrophils, CD34 progenitor cells, mammary gland, kidney, adrenals, ovaries, testis, prostrate, seminal vesicles and hypothalamus.

**Reagent**

Supplied lyophilized from a 0.2 µm-filtered solution in 10 mM phosphate and 50 mM sodium chloride, pH 8.0.

**Precautions and Disclaimer**

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

**Preparation Instructions**

Reconstitute the contents of the vial using sterile 4 mM HCl containing at least 1 mg/mL bovine serum albumin. Prepare a stock solution of no less than 100 µg/mL.

**Storage/Stability**

Store at −20 °C. Upon reconstitution, store at 2-8 °C for up to one month. For extended storage, freeze in working aliquots at −20 °C. Repeated freezing and thawing is not recommended.

**Product Profile**

The biological activity of Prolactin is measured in a cell proliferation assay using the rat lymphoma, Nb2-11. Purity: >97% as determined by SDS-PAGE, visualized with silver stain.

Endotoxin: <1 EU/µg as determined by LAL

**References**


ADM, PHC 08/11-1