Prolactin is a lactogenic hormone that plays a role in breast cancer, regulation of reproductive function, and immunoregulation. The 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. Glycosylated human prolactin (G-hPRL) was first isolated and purified from human pituitaries by Lewis et al., with an estimated molecular mass of ~25,000 Da, and an immunological and biological activity of 25–50% of the non-glycosylated hPRL. The presence of a unique and partially occupied glycosylation site in Asn in human, monkey, ovine, porcine, dromedary, equine, and whale PRL makes it an ideal model of glycosylation for N-glycan studies since it exhibits the simplest type of glycosylation macroheterogeneity, with an occupancy range of 10–30% of G-hPRL relative to the total hPRL of either pituitary or recombinant origin. It has been postulated that hPRL glycosylation might possibly modulate the bioactivity of the circulating pool of the hormone, perhaps by selectively down regulating PRL action at individual target tissues.

This recombinant, human prolactin product is expressed in human HEK cells as a 199 amino acid, glycosylated protein, with a calculated molecular mass of 23 kDa. It is supplied as a solution in 0.2 µm filtered phosphate buffered saline with no additives or carriers. It is aseptically filled.

EC<sub>50</sub>: ≤2 ng/mL

The EC<sub>50</sub> is defined as the effective concentration of prolactin that elicits a 50% increase of cell growth. The biological activity is determined by the dose dependent stimulation of the proliferation of Nb2-11 cells.

Purity: ≥95% (SDS-PAGE)

Endotoxin level: ≤1 EU/µg of prolactin

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

Preparation Instructions
Briefly centrifuge the vial before opening. After initial thawing it is recommended to store the protein in working aliquots at –20 °C. The product can be diluted in PBS.

Storage/Stability
Store the product at –20 °C. The product retains activity for at least 2 years as supplied.
References