Miltenyi Biotec

Human Prolactin
research grade

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1. Description

Products Human Prolactin, research grade.

Recombinant human prolactin.

Content in µg	Order no.
50	130-093-985

Biological activity The ED_{50} is ≤1 ng/mL corresponding to an activity of $\geq 1 \times 10^6$ U/mg.

▲ **Note:** The ED_{50} is determined by the ability to stimulate the proliferation of rat lymphoma Nb2-11 cells.

Primary structure Single, non-glycosylated polypeptide chain with N-terminal methionine (200 amino acid residues).

Molecular mass 23.0 kDa.

Source Produced in *E. coli*.

Product format Lyophilized from a filtered (0.2 µm) buffer solution.

Stabilizer None.

Purity >95% as determined by SDS-PAGE analysis.

Endotoxin level Low endotoxin (<1.0 EU/µg cytokine) as determined by Limulus Amebocyte Lysate (LAL) assay.

Storage Lyophilized Human Prolactin, research grade should be stored at –20 °C. The expiration date is indicated on the vial label. Upon reconstitution aliquots should be stored at –20 °C or below. Avoid repeated freeze-thaw cycles.

Reconstitution It is recommended to reconstitute lyophilized Human Prolactin, research grade with deionized sterile-filtered water to a final concentration of 0.1–1.0 mg/mL in a minimal volume of 100 µL. Further dilutions should be prepared with 0.1% bovine serum albumin (BSA) or human serum albumin (HSA) in phosphate-buffered saline.

1.1 Background information

Prolactin, also termed luteotropin, is a neuroendocrine hormone. It is produced and secreted by the pituitary gland as well as other tissues such as skin, brain, prostate, uterus, or fat tissue. The hormone is mainly known to stimulate the milk production (lactation) during pregnancy and suckling and can influence the maternal behavior. Besides its role in reproduction and behavior, prolactin seems to exert several metabolic, osmo-, developmental- and immunoregulatory effects. For example, it is involved in pancreatic development, angiogenesis, promotes neurogenesis and can stimulate proliferation of oligodendrocyte precursors. Furthermore, prolactin influences the proliferation and differentiation of lymphocytes, as it can regulate the activities of ornithine decarboxylase and protein kinase C.

1.2 Applications

Optimal concentration for a specific application should be determined by a dose-response experiment.

Refer to www.miltenyibiotec.com for all data sheets and protocols. Miltenyi Biotec provides technical support worldwide. Visit www.miltenyibiotec.com for local Miltenyi Biotec Technical Support contact information.

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Miltenyi Biotec B.V. & Co. KG
Friedrich-Ebert-Straße 68, 51429 Bergisch Gladbach, Germany
Phone +49 2204 8306-0, Fax +49 2204 85197
macsde@miltenyi.com
www.miltenyibiotec.com

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