

	Recombinant Human Prolactin
Accession #	P01236
Alternate Names	PRL; Prolactin
Source	Human embryonic kidney cell, HEK293-derived human Prolactin protein
Protein sequence	Leu29-Cys227
M.Wt	22.9 kDa
Appearance	Solution protein.
Stability & Storage	Avoid repeated freeze-thaw cycles. It is recommended that the protein be aliquoted for optimal storage. 12 months from date of receipt, -20 to -70 °C as supplied.
Concentration	0. 2 mg/mL
Formulation	Dissolved in sterile PBS buffer.
Reconstitution	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. This solution can be diluted into other aqueous buffers.
Biological Activity	Measured in a cell proliferation assay using Nb2-11 rat lymphoma cells. The EC50 for this effect is $5-14.8 \text{ pg/mL}$
Shipping Condition	Shipping with dry ice.
Handling	Centrifuge the vial prior to opening.
Usage	For Research Use Only! Not to be used in humans.
uality Control	Province Block
Purity mention	> 95%, determined by SDS-PAGE.

Description

Endotoxin

Prolactin (gene name PRL) is a secreted neuroendocrine pituitary hormone that acts primarily on the mammary gland to promote lactation, but has pleiotropic effects in both males and females ^[1-6]. Prolactin is predominantly found as 199 amino acid, 25 kDa glycosylated and 23 kDa non-glycosylated monomers ^[6]. Human prolactin shares only 60% and 63% amino acid sequence identity with mouse and rat prolactin, respectively, although rat prolactin can activate the human prolactin receptor ^[3]. Post-translational modifications such as polymerization, complex formation with IgG (in humans), glycosy-lation, and proteolytic cleavage can alter the activities of prolactin ^[6-8]. Non-glycosylated prolactin is produced by the pituitary and packaged in storage granules before secretion, while glycosylated prolactin is reported to be constitutively secreted, have lower biological potency, and be removed from the circulation more quickly ^[3, 6, 7]. Cleavage by matrix metalloproteinases or

<0.010 EU per 1 ug of the protein by the LAL method.

Cathepsin D can produce N-terminal 16 kDa antiangiogenic fragments also called vasoinhibins ^[9, 10]. Thrombin can produce Cterminal 16 kDa fragments that are not antiangiogenic ^[3]. Prolactin is synthesized mainly by the anterior pituitary in all mammals, where secretion is under tonic inhibition by hypothalamic dopamine ^[2, 3]. In humans, prolactin is also produced peripherally ^[2-5]. Prolactin expression is low during early human pregnancy, but increases in late pregnancy ^[2, 3]. The prolactin receptor (gene name PRLR) is a transmembrane type I glycoprotein that belongs to the cytokine hematopoietic receptor family. Expression of the prolactin receptor is widespread ^[2-5].

Reference

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