

## Prolactin ovine (sheep), recombinant, *E. coli*

Cat. No.	Amount
PR-498	1 mg

For *in vitro* use only  
Quality guaranteed for 12 months  
Store at -20°C

### Avoid freeze / thaw cycles

### Form

Lyophilized. Prolactin was lyophilized from a solution with 0.0045 mM NaHCO<sub>3</sub>.

### Solubility

It is recommended to reconstitute the lyophilized Prolactin in sterile bidest H<sub>2</sub>O not less than 100 µg/ml. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA).

### Activity

ED<sub>50</sub>: < 0.065 ng/ml, determined by the dose-dependent stimulation of the proliferation of rat lymphoma, Nb2-11.

### Endotoxin

Less than 0.1 ng/µg (IEU/µg) of Prolactin.

### Molecular Weight

23 kDa

### Purity

≥ 95% by SDS-PAGE and RP-HPLC

### Description

Prolactin is a lactogenic hormone secreted by the adenohypophysis. Besides its major action on lactation, in some species prolactin exerts effects on reproduction, maternal behavior, fat metabolism, immunomodulation, and osmoregulation. Prolactin has been shown also to have cytokine-like and important immunoregulatory activities. It contributes to the development of lymphoid tissues and the maintenance of physiological immune function and also modulates a variety of T-cell immune responses. Prolactin has been reported to activate cellular proliferation in non-reproductive tissue, such as liver, spleen, and thymus. It induces significant proliferation in aortic smooth muscle cells and also enhances proliferation of these cells induced by PDGF. Prolactin also appears to be directly mitogenic for pancreatic beta cells. Prolactin is also mitogenic for cultured astrocytes.

Recombinant Ovine Prolactin produced in *E. coli* is a single, non-glycosylated polypeptide chain containing 200 amino acids and having a molecular mass of 23 kDa.

Recombinant ovine Prolactin is purified by proprietary chromatographic techniques.

### Selected References:

- Leibovich *et al.* (2001) Large-scale preparation of recombinant ovine prolactin and determination of its *in vitro* and *in vivo* activity. *Protein Expr. Purif.* **22**:489.
- Fernandez *et al.* (2000) Ovine placental lactogen and ovine prolactin: partial proteolysis and conformational stability. *Int. J. Biochem. Cell. Biol.* **32**:597.
- Bignon *et al.* (1999) *In vitro* expression of long and short ovine prolactin receptors: activation of Jak2/STAT5 pathway is not sufficient to account for prolactin signal transduction to the ovine beta-lactoglobulin gene promoter. *J. Mol. Endocrinol.* **23**:125.
- Vincent *et al.* (1997) Rapid communication: a restriction fragment length polymorphism in the ovine Prolactin gene. *J. Anim. Sci.* **75**:1686.
- Luquita *et al.* (1996) Ovine prolactin increases hepatic UDPglucuronosyltransferase activity in ovariectomized rats. *J. Pharmacol. Exp. Ther.* **278**:921.
- Muccioli *et al.* (1994) Modulation of prolactin receptors in the rat hypothalamus in response to changes in serum concentration of endogenous prolactin or to ovine prolactin administration. *Brain Res.* **663**:244.