

Prolactin Soluble Receptor, rat recombinant (rrPRL-R)

Catalog No: 97210
Lot No: XXXXX
Source: *E. coli*
Synonyms: PRL-R, Prolactin receptor, Lactogen receptor, Prlr

Background

Prolactin is a pituitary hormone involved in the stimulation of milk production, salt and water regulation, growth, development and reproduction. The initial step in its action is the binding to a specific membrane receptor (prolactin receptor) which belongs to the superfamily of class 1 cytokine receptors. The function of the prolactin receptor is mediated, at least in part, by two families of signaling molecules: Janus kinases and signal transducers and activators of transcription. Prolactin (PRL) is a hormone involved in a variety of important functions including ion transport and osmoregulation, stimulation of milk, protein synthesis as well as the regulation of numerous reproductive functions. PRL exerts its influence on different cell types through a signal transduction pathway which begins with the binding of the hormone to a transmembrane PRL receptor. Immunoreactive PRL receptor, a member of the cytokine receptor family, varies in size (short and long forms) with tissue source and species, from ~40 kDa to 100 kDa. The PRL receptor consists of at least three separate domains: an extracellular region with 5 cysteines which contains the prolactin binding site, a single transmembrane domain and a cytoplasmic region, the length of which appears to influence ligand binding and regulate cellular function.

Description

Prolactin Receptor Rat Extra Cellular Domain Recombinant produced in *E. coli* is a non-glycosylated, Polypeptide chain containing 206 amino acids and having a molecular mass of 24120 Dalton. Prolactin Receptor is purified by proprietary chromatographic techniques.

Physical Appearance

Sterile filtered white lyophilized (freeze-dried) powder.

Formulation

The protein was lyophilized from a concentrated (1 mg/ml) solution with 0.0045 mM NaHCO₃.

Solubility

It is recommended to reconstitute the lyophilized PRL-R in sterile 18 MΩ-cm H₂O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.

Stability

Lyophilized PRL-R although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution Prolactin Receptor should be stored at 4°C between 2-7 days and for future use below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

Purity

Greater than 97.0% as determined by (a) Analysis by SEC-HPLC, (b) Analysis by SDS-PAGE.

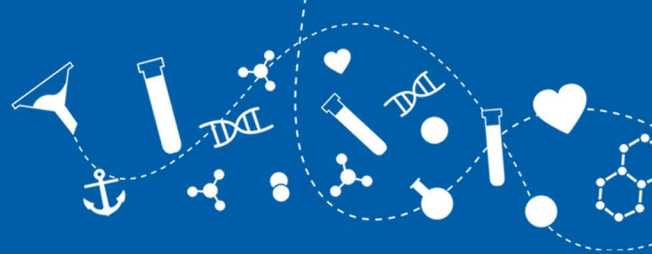
Amino Acid Sequence

The sequence of the first five N-terminal amino acids was determined and was found to be Gly-Lys-Pro-Glu-Ile.

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**Activity**

Activity was determined by the dose-dependant inhibition of Prolactin-stimuled proliferation of Nb2 cells and by high affinity binding of oPLR and other lactogenic hormones.

Usage

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