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PRL R Rat

Prolactin Soluble Receptor Rat Recombinant
GRF0344

Product Overview

Name	PRL R Rat
Description	
Prolactin Soluble Receptor Rat Recombinant	
Accession (Primary)	P05710
Synonyms	
PRL-R, Prolactin receptor, Lactogen receptor, Prlr.	
Introduction	

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.

Source

Escherichia Coli.

Physical Appearance

Sterile Filtered White lyophilized (freeze-dried) powder.

Formulation

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

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

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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.

Biological Activity

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

Solubility

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

Protein content

Protein quantitation was carried out by two independent methods 1. UV spectroscopy at 280 nm using the absorbency value of 2.48 as the extinction coefficient for a 0.1% (1mg/ml) solution. This value is calculated by the PC GENE computer analysis program of protein sequences (IntelliGenetics). 2. Analysis by RP-HPLC, using a standard solution of PRLr-ECD as a Reference Standard.

Precautions

PRL R Rat is for research use only and not for use in diagnostic or therapeutic procedures.

Target Information: (P05710)