RayBiotech, Inc.
3607 Parkway Lane suite 200
Norcross,GA 30092
Tel: 770-729-2992, 1-888-494-8555
Fax: 770-206-2393
Website: www.raybiotech.com
Email: info@raybiotech.com

Certificate of Analysis and Data Sheet

Recombinant Human Prolactin Receptor

Catalog No.	**Source**
228-11309	*Escherichia Coli.*

Synonyms:

PRL-R, hPRLrI.

Introduction:

Prolactin is a pituitary hormone that plays a role in the stimulation of milk production, salt and water regulation, growth, development and reproduction. The primary step in its action is the binding to a specific membrane receptor (prolactin receptor) which belongs to the superfamily of class 1 cytokine receptors. Prolactin is a hormone involved in a range of significant functions including ion transport and osmoregulation, stimulation of milk, protein synthesis as well as the regulation of numerous reproductive functions. Prolactin exerts its influence on different cell types through a signal transduction pathway which begins with the binding of the hormone to a transmembrane Prolactin receptor. PRLR varies in size (short and long forms) with tissue source and species, from ~40 kDa to 100 kDa. The PRL-R consists of at least 3 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:

Extra Cellular Domain Prolactin Receptor produced in *E.coli* is a non-glycosylated, Polypeptide chain Human Recombinant containing 210 amino acids and having a molecular mass of 23.97 kDa. The Prolactin Receptor is purified by proprietary chromatographic techniques.

Physical Appearance:

Sterile filtered white lyophilized powder.

Purity:

Greater than 97.0% as determined by:
(a) Analysis by RP-HPLC.
(b) Analysis by SDS-PAGE.
(c) Gel filtration at pH 8 under non-denature conditions.

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Formulation:
The Prolactin Receptor was lyophilized from a concentrated (0.4 mg/ml) solution with 0.0045 mM $NaHCO_3$.

Solubility:
It is recommended to reconstitute the lyophilized PRLR in sterile 18 M-cm H_2O not less than 100 µg/ml and not more than 1 mg/ml, which can then be further diluted to other aqueous solutions.

Stability:
Lyophilized PRL-R although stable at room temperature for 1-2 weeks, should be stored desiccated below -18°C or preferably even at -80°C to prevent dimmer formation. Upon reconstitution PRL-R should be stored sterile at 4°C between 2-7 days and for future use below -18°C. For long term storage at 4°C it is recommended to add a carrier protein (0.1% HSA or BSA).
Please prevent freeze-thaw cycles as they cause oligomerization of the protein.

Amino Acid Sequence:
The sequence of the first six N-terminal amino acids was determined to be **Ala-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 ovine Prolactin and other lactogenic hormones in 1:1 molar ratio.

Protein Content:
UV spectroscopy at 280 nm using the absorbency value of 2.63 as the extinction coefficient for a 0.1% (1 mg/ml) solution. This value is calculated by the PC GENE computer analysis program of protein sequences (IntelliGenetics).

Reference:
Bignon et al. (1994) JBC 269; 3318-24 and tested according to Gertler et al. (1996) JBC 271; 24482-91.