



Prolactin Soluble Receptor, human recombinant (rHuPrl-R)

Catalog No: 08544
Lot No: XXXXX
Source: *E. coli*
Synonyms: PRL-R, hPRLrI

Background

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

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

Physical Appearance

Sterile filtered white lyophilized powder.

Formulation

The Prolactin Receptor was lyophilized from a concentrated (0.4 mg/ml) solution with 0.0045 mM NaHCO₃.

Solubility

It is recommended to reconstitute the lyophilized PRLR in sterile 18 MΩ-cm H₂O 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 dimer 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.

Purity

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

Amino Acid Sequence

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

CONTACT US TODAY

BIOMOL GmbH • Kieler Straße 303a • 22525 Hamburg • Germany • info@biomol.de • www.biomol.de

Fon: +49 (0)40-853 260 0 • TOLL FREE IN GERMANY: Fon: 0800-246 66 51



Activity

Activity is determined by the dose-dependant inhibition of Prolactin stimulated proliferation of Nb2 cells and by high affinity binding of ovine Prolactin and other lactogenic hormones in 1:1 molar ratio.

Usage

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