Recombinant Chicken Leptin Receptor

Cat. No. LEPR-1250C **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Chicken Leptin Binding Domain also called Leptin Receptor produced in*E.Coli*is a single, non-glycosylated, polypeptide chain containing 208 amino acids and having a molecular mass of 24.5 kDa. Chicken Leptin Receptor consists of the cytokine binding domain of leptin receptor amino acids 420-626 of chicken leptin receptor. The Leptin Binding Domain is purified by proprietary chromatographic techniques.
Species	Chicken
Source	E.coli
ProteinLength	420-626 a.a.
Description	Leptin receptor (LEPR), also known as OB-R and B219, is a single-transmembrane domain receptor of the cytokine receptor family. Leptin receptor exists as homodimer and binds Leptin with high affinity, thus mediates the biological function of the adipocyte-specific hormone Leptin. LEPR is expressed at high levels in hematopoietic stem cells, lymphohematopoietic cell lines, as well as adult reproductive organs. Several isoforms of LEPR have been identified, and LEPR structurally contains two hemopoietin receptor domains, a fibronectin type III domain and a WSXWS domain within the extracellular region. Interaction of leptin and leptin receptor is crucial for body weight and bone mass regulation in mammals through hypothalamic effects on satiety and energy expenditure. Meanwhile, research data supports a leptin receptor activation model based on ligand-induced conformational changes.

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Physical Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Formulation	The protein was lyophilized from a concentrated (0.2 to 0.5 mg/ml) solution of Tris-HCl buffer, pH 9.0 with 150mM NaCl and 10-fold (w/w) excess of glycine.
Solubility	It is recommended to reconstitute the lyophilized Leptin Receptor Chicken in sterile water at pH 8-9, not less than 100μg/ml, which can then be further diluted to other aqueous solutions, preferably in presence of carrier protein.
Purity	Greater than 99.0% as determined by: (a) Analysis by RP-HPLC. (b) Analysis by SDS-PAGE.
Amino Acid Sequence	The sequence of the first six N-terminal amino acids was determined and was found to be Ala-Ile-Asp-Val-Asn-Ile.
Biological Activity	Biological Activity is evidenced by high affinity binding of mammalian leptins at 1:1 molar ratio.
Protein Content	Protein quantitation was carried out by two independent methods: 1. UV spectroscopy at 280 nm using the absorbency value of 2.45 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 calibrated solution of Leptin Binding Domain as a Reference Standard.
Stability	Leptin Receptor Chicken should be stored desiccated below -18℃. Upon reconstitution at > 0.1 Leptin Receptor Chicken mg/ml and up to 40.5 mg/ml mM and filter sterilization chLBD can be stored at 4℃for several months. Sterile solutions at 0.5 mg/ml or less are stable at +4℃for several months. Please prevent freeze-thaw cycles.

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GENE INFORMATION

Gene Name	LEPR leptin receptor [Gallus gallus]
Synonyms	LEPR; leptin receptor
Gene ID	374223
mRNA Refseq	NM_204323
Protein Refseq	NP_989654
UniProt ID	Q6UC82
Chromosome Location	8
Pathway	Adipocytokine signaling pathway; Cytokine-cytokine receptor interaction; Jak-STAT signaling pathway; Neuroactive ligand-receptor interaction
Function	cytokine receptor activity; protein binding; receptor activity

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