

LEP

Recombinant Human Leptin

Catalog No.	CRL300A CRL300B CRL300C	Quantity:	200 µg 1.0 mg 5 mg
Alternate Names:	Obese, Obesity factor, Obesity protein, LEP, Ob, OBS		
Description:	<p>Human Leptin plays a key role in regulating energy intake and energy expenditure, including appetite and metabolism. It is one of the most important adipose derived hormones. The Ob (Lep) gene (Ob for obese, Lep for leptin) is located on chromosome 7 in humans. It is manufactured primarily in the adipocytes of white adipose tissue, and the level of circulating leptin is directly proportional to the total amount of fat in the body. Leptin acts on receptors in the hypothalamus of the brain where it inhibits appetite by (1) counteracting the effects of neuropeptide Y (a potent feeding stimulant secreted by cells in the gut and in the hypothalamus); (2) counteracting the effects of anandamide (another potent feeding stimulant that binds to the same receptors as THC), and (3) promoting the synthesis of H-MSH, an appetite suppressant. This appetite inhibition is long-term, in contrast to the rapid inhibition of eating by cholecystokinin (CCK) and the slower suppression of hunger between meals mediated by PYY3-36.</p> <p>The absence of leptin (or its receptor) leads to uncontrolled food intake and resulting obesity.</p>		
Physical Appearance:	Sterile filtered white lyophilized (freeze-dried) powder.		
Gene ID:	3952		
Source:	<i>E. coli</i>		
Molecular Weight:	Approximately 16.0 kDa, a single non-glycosylated polypeptide chain containing 146 amino acids.		
Formulation:	Lyophilized from a 0.2µm filtered concentrated solution in PBS, pH 7.4.		
Purity:	>97% by SDS-PAGE and HPLC analyses.		
Endotoxin Level:	Less than 1EU/µg as determined by LAL method.		
Biological Activity:	Fully biologically active when compared to standard. The ED ₅₀ determined by a chemotaxis bioassay using human Leptin R transfected BaF3 mouse proB cells is less than 2 ng/ml.		
Specific Activity:	≥5.0 × 10 ⁵ IU/mg		
Amino Acid Sequence:	VPIQKVQDDT KTLIKTIVTR INDISHTQSV SSKQKVGTGLD FIPGLHPILT LSKMDQTLAV YQQILTSMPs RNVIQISNDL ENLRDLLHVL AFSKSchLPW ASGLETLDsL GGVLEASGYS TEVVALSRLQ GSLQDMLWQL DLSPGC		
Reconstitution:	Centrifuge vial prior to opening. Add sterile distilled water or aqueous buffer to a concentration of 0.1-1.0 mg/ml. Further dilutions should be made in appropriate buffered solutions.		
Storage & Stability:	This lyophilized preparation is stable at 2-4°C, but should be kept desiccated at -20°C for long term storage. Upon reconstitution, the preparation is stable for up to one week at 2 -4°C. For maximal stability, apportion the reconstituted preparation into working aliquots and store at -20°C to -80°C. Avoid repeated freeze/thaw cycles.		

NOT FOR HUMAN USE. FOR RESEARCH ONLY. NOT FOR DIAGNOSTIC OR THERAPEUTIC USE.



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