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Leptin Protein

Leptin Human Recombinant
GRF0211

Product Overview

Name	Leptin Protein
Description	
Leptin Human Recombinant	
Accession (Primary)	P41159
Synonyms	
OB Protein, Obesity Protein, OBS, Obesity factor.	
Introduction	
A 16-kDa peptide hormone secreted from white adipocytes and implicated in the regulation of food intake and energy balance. Leptin provides the key afferent signal from fat cells in the feedback system that controls body fat stores.	
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 Leptin although stable at room temperature, should be stored desiccated below 0°C. Reconstituted Leptin is best stored refrigerated at 4°C.	
Purity	
Greater than 95.0% 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 Ala-Val-Pro-Ile-Gln.	
Biological Activity	
Biological Activity is evidenced by inducing proliferation of BAF/3 cells stably transfected with the long form of human leptin receptor.	
Solubility	
The lyophilized Leptin is very soluble in water and most aqueous buffers below and above the isoelectric point.	
References	

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1. Title :Leptin and Amylin Act in an Additive Manner to Activate Overlapping Signaling Pathways in Peripheral Tissues In vitro and ex vivo studies in humans. Publication :Published online before print September 24, 2010, doi: 10.2337/dc10-0518 Diabetes Care January 2011 vol. 34 no. 1 132-138 . Link : Leptin prospec publication 2. Title :The Mammalian Target of Rapamycin as Novel Central Regulator of Puberty Onset via Modulation of Hypothalamic Kiss1 System. Publication : Published online before print September 4, 2009, doi: 10.1210/en.2009-0096 Endocrinology November 1, 2009 vol. 150 no. 11 5016-5026 Link : Leptin Protein prospec publication 3. Title :p38 Mitogen-Activated Protein Kinase and Liver X Receptor-? Mediate the Leptin Effect on Sterol Regulatory Element Binding Protein-1c Expression in Hepatic Stellate Cells. Publication :Mol Med. 2012; 18(1): 10–18. Published online 2011 October 3. doi: 10.2119/molmed.2011.00243 Link : Leptin Human prospec publication 4. Title: PI3K integrates the effects of and leptin on large-conductance Ca2+-activated K+ channels in neuropeptide Y neurons of the hypothalamic arcuate nucleus Publication: American Journal of Physiology-Endocrinology and Metabolism 298.2 (2010): E193-E201. Link: OB Protein prospec publication

Protein content

Protein quantitation was carried out by two independent methods: 1. UV spectroscopy at 280 nm using the absorbency value of 0.878 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 as a Reference Standard.

Precautions

Leptin Protein is for research use only and not for use in diagnostic or therapeutic procedures.

Target Information: (P41159)