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37-1097: Human Leptin Recombinant Protein(Discontinued)

Reactivity : Human
Alternative Name : LEPD Protein, OB Protein, OBS Protein,

Description

Source : E. coli
Leptin is one of the most important hormones secreted by adipocytes, as an adipokine that modulates multiple functions including energy homeostasis, thermoregulation, bone metabolism, endocrine and pro-inflammatory immune responses. The circulating leptin levels serve as a gauge of energy stores, thereby directing the regulation of energy homeostasis, neuroendocrine function, and metabolism. Recent studies suggest that leptin is physiologically more important as an indicator of energy deficiency, rather than energy excess, and may mediate adaptation by driving increased food intake and directing neuroendocrine function to converse energy, such as inducing hypothalamic hypogonadism to prevent fertilization. One of these functions is the connection between nutritional status and immune competence. The adipocyte-derived hormone Leptin has been shown to regulate the immune response, innate and adaptive response, both in normal and pathological conditions. Thus, Leptin is a mediator of the inflammatory response. Leptin has a dual effect on bone, acting by two independent mechanisms. As a signal molecule with growth factor characteristics, leptin is able to stimulate osteoblastic cells and to inhibit osteoclast formation and activity, thus promoting osteogenesis. However, as a molecule which stimulates sympathetic neurons in the hypothalamus, leptin indirectly inhibits bone formation. This inhibitory effect of leptin mediated by activation of sympathetic nervous system can be abrogated by application of blood pressure-reducing beta-blockers, which also inhibit receptors of hypothalamic adrenergic neurons. Leptin appears to regulate a number of features defining Alzheimer's disease (AD) at the molecular and physiological level. Leptin can stimulate mitogenic and angiogenic processes in peripheral organs. Because leptin levels are elevated in obese individuals and excess body weight has been shown to increase breast cancer risk in postmenopausal women. Furthermore, a recent report clearly shows that targeting leptin signaling may reduce mammary carcinogenesis.

Product Info

Amount :	Human Leptin Recombinant Protein(Discontinued) / 500 µg
Purification :	> 98 % as determined by SDS-PAGE
Content :	Formulation Lyophilized from sterile PBS, pH 7.4 Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization.
Storage condition :	Store it under sterile conditions at -20°C to -80°C. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.
Amino Acid :	Val22-Cys167

Application Note

Measured by its binding ability in a functional ELISA . 1. Immobilized human Leptin at 1.25 Ã□Âµg/ml (100 Ã□ÂµL/well) can bind human Leptin receptor Fc chimera with a linear range of 0.032-4.0 Ã□Âµg/ml . 2. Immobilized human Leptin at 5 Ã□Âµg/ml (100 Ã□ÂµL/well) can bind human Leptin receptor his with a linear range of 0.032-4.0 Ã□Âµg/ml.
Other pack size also available.

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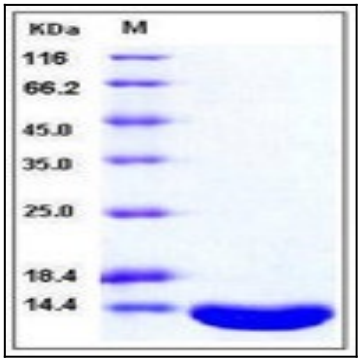

Fig 1: Human Leptin Recombinant Protein