Datasheet for ABIN2018192

Leptin Protein (LEP) (AA 22-167)

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Overview

Quantity:	200 µg
Target:	Leptin (LEP)
Protein Characteristics:	AA 22-167
Origin:	Rat
Source:	Escherichia coli (E. coli)
Protein Type:	Recombinant
Biological Activity:	Active

Product Details

Characteristics:	ED50 < 10 µg/mL, measured by a cell proliferation assay using LoVo cells, corresponding to a specific activity of > 100 units/mg. AA 22-167, expressed with an N-terminal Met.
Purity:	> 95 % as analyzed by SDS-PAGE and HPLC.
Endotoxin Level:	< 0.2 EU/µg, determined by LAL method.

Target Details

Target:	Leptin (LEP)
Alternative Name:	Leptin (LEP Products)
Background:	Leptin is a cytokine belonging to the Interleukin 6 family, and has a four-helix bundle structure. Leptin is encoded by the ob gene, and produced and secreted by white adipose tissue. The receptors of Leptin are Type I cytokine receptors, which exist in two different forms: a short

Target Details

	form expressed in multiple tissues, and a long form expressed exclusively in the central nervous system (CNS). Upon binding to Leptin, the receptors activate the JAK/STAT3 pathway and PI3K, and stimulate transcriptional programs that regulate feeding behavior, metabolic rate, endocrine axes, and glucose fluxes. The deficiency of Leptin in human and mouse causes morbid obesity, diabetes, and neuroendocrine anomalies. Leptin also has effects on reproduction and immunity. In summary, Leptin is a pivotal cytokine controlling energy balance, and as such has profound effects on human health. Recombinant rat Leptin (rrLeptin) produced in E. coli is a single non-glycosylated polypeptide chain containing 147 amino acids. A fully biologically active molecule, rrLeptin has a molecular mass of 16.3 kDa analyzed by reducing SDS-PAGE. Synonyms: Obesity protein (OB)
Molecular Weight:	16.3 kDa, observed by reducing SDS-PAGE.
UniProt:	P50596
Pathways:	JAK-STAT Signaling, AMPK Signaling, Hormone Transport, Peptide Hormone Metabolism, Hormone Activity, Negative Regulation of Hormone Secretion, Regulation of Carbohydrate Metabolic Process, Feeding Behaviour, Monocarboxylic Acid Catabolic Process

Application Details

Restrictions:	For Research Use only

Handling

Format:	Lyophilized
Reconstitution:	Reconstituted in ddH2O at 100 µg/mL.
Buffer:	Lyophilized after extensive dialysis against 50 mM Tris, pH 8.0.
Storage:	-80 °C
Storage Comment:	Lyophilized recombinant rat Leptin (rrLeptin) remains stable up to 6 months at -80 °C from date of receipt. Upon reconstitution, rrLeptin remains stable up to 2 weeks at 4 °C or up to 3 months at -20 °C.
Expiry Date:	6 months