Recombinant LEP protein (His tag)

Catalog Number	537731
Synonyms	Obese protein; Obesity factor
Species	Human
Expression System	E. coli
Accession	P41159
Molecular Weight	Predictes a molecular mass of 17.68 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 18 kDa band.

Product Information

Sequence Region	22-167
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>87%, by SDS-PAGE with Coomassie Brilliant Blue staining.
Endotoxin	Not tested.
Activity	Not tested.
Stability	Samples are stable for up to twelve months from date of receipt at -70℃
Protein Construction	DNA encoding 22-167 aa (P41159) were fused with 6His tag.

Storage & Handling

Reconstitution	Reconstitute at 0.25 μg/μl in sterile water for short-term storage. Reconstitution with 50% glycerol solution is recommended for longer term storage (see Stability and Storage for more details). If a different concentration is needed for your purposes please adjust the reconstitution volume as required (please note: the ion concentration of the final solution will vary according to the volume used). Note: Centrifuge vial before opening. When reconstituting, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution.
Storage	Store it under sterile conditions at -20℃ to -80℃. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.
Shipping	In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature. Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise.

Description

Description	Recombinant Human Leptin (Obese Protein) Fragment (aa 22-167) is a high-purity, soluble protein fragment designed for energy balance and metabolic research. This stable 146-amino acid construct retains key functional regions, making it ideal for structural studies, biochemical assays, and investigations into appetite regulation and body weight control mechanisms. Leptin, encoded by the LEP gene, is a critical regulator of energy homeostasis, body weight, and metabolic function. As a secreted hormone, it acts centrally in the hypothalamus to suppress appetite by modulating neuropeptide release and peripherally to influence metabolism, insulin secretion, reproductive function, and immune responses. It activates multiple signaling pathways—including JAK2-STAT3, MAPK, and PI3K-AKT—to regulate processes such as angiogenesis, cell proliferation, and inflammation. The full-length protein is secreted into circulation and exerts pleiotropic effects across tissues, playing roles in nutrient absorption, innate and adaptive immunity, and T-cell proliferation through pathways like mTOR signaling.