



Bovine LEP/Leptin ELISA Kit

E45K00825

Catalog Number:E45K00825

Species Reactivity:Bovine

Storage:Store at +4°C. Please refer to protocols.

Cite ID#:EN5521275

Type:Bovine (Cow, Cattle) ELISA Kits

Research Field:Metabolism

Description:Bovine LEP/Leptin ELISA Kit is a ready-to-use microwell, strip plate ELISA (enzyme-linked immunosorbent assay) Kit designed for the quantitative measurement of LEP in biological samples. Our rigorously validated, ready-to-go Bovine LEP/Leptin ELISA Kit use a simple protocol that easily integrates into your current processes, allowing you to rapidly and accurately detect LEP in your samples. Appropriate sample types may include Cell Culture Supernates, Serum, Platelet-poor EDTA Plasma, Platelet-poor Heparin Plasma, Urine. Precision Intra-Assay Precision (Precision within an assay): Three samples of known concentration were tested several times on one plate to assess intra-assay precision. Inter-Assay Precision (Precision between assays): Three samples of known concentration were tested in several separate assays to assess inter-assay precision. Assays were performed by at least two technicians using two lots of components.

Assay type:Sandwich

Detection principle:Spectrophotometrical

Sample type:This immunoassay kit allows for the in vitro quantitative determination in Serum, plasma, tissue homogenates, cell culture supernates and other biological fluids.

Sensitivity:0.069 ng/mL

Assay range:0.156-10 ng/mL

Kit components:Assay Plate, Standard, Sample Diluent, Assay Diluent A&B, Detection Reagent A&B, Wash Buffer, Substrate, Stop Solution.

Other reagents required:Deionized or distilled water

Gene Name:LEP

Swiss-Prot No.:P50595

Function:Key player in the regulation of energy balance and body weight control. Once released into the circulation, has

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central and peripheral effects by binding LEPR, found in many tissues, which results in the activation of several major signaling pathways (By similarity). In the hypothalamus, acts as an appetite-regulating factor that induces a decrease in food intake and an increase in energy consumption by inducing anorexigenic factors and suppressing orexigenic neuropeptides, also regulates bone mass and secretion of hypothalamo-pituitary-adrenal hormones. In the periphery, increases basal metabolism, influences reproductive function, regulates pancreatic beta-cell function and insulin secretion, is pro-angiogenic for endothelial cell and affects innate and adaptive immunity (By similarity). In the arcuate nucleus of the hypothalamus, activates by depolarization POMC neurons inducing FOS and SOCS3 expression to release anorexigenic peptides and inhibits by hyperpolarization NPY neurons inducing SOCS3 with a consequent reduction on release of orexigenic peptides (By similarity). In addition to its known satiety inducing effect, has a modulatory role in nutrient absorption. In the intestine, reduces glucose absorption by enterocytes by activating PKC and leading to a sequential activation of p38, PI3K and ERK signaling pathways which exerts an inhibitory effect on glucose absorption (By similarity). Acts as a growth factor on certain tissues, through the activation of different signaling pathways increases expression of genes involved in cell cycle regulation such as CCND1, via JAK2-STAT3 pathway, or VEGFA, via MAPK1/3 and PI3K-AKT1 pathways (By similarity). May also play an apoptotic role via JAK2-STAT3 pathway and up-regulation of BIRC5 expression. Pro-angiogenic, has mitogenic activity on vascular endothelial cells and plays a role in matrix remodeling by regulating the expression of matrix metalloproteinases (MMPs) and tissue inhibitors of metalloproteinases (TIMPs). In innate immunity, modulates the activity and function of neutrophils by increasing chemotaxis and the secretion of oxygen radicals. Increases phagocytosis by macrophages and enhances secretion of pro-inflammatory mediators. Increases cytotoxic

Form:ELISA Kits

Synonyms:Obesity factor,OB,OBS

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