

Leptin/OB Monoclonal Antibody(Detector)

catalog number: AN001430P

Note: Centrifuge before opening to ensure complete recovery of vial contents.

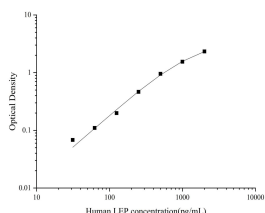
Description

Reactivity	Human
Immunogen	Recombinant Human Leptin/OB protein expressed by E.coli
Host	Rat
Isotype	Rat IgG2a
Clone	7C1
Purification	Protein A/G Purification
Buffer	Phosphate buffered solution, pH 7.2, containing 0.05% proclin 300.

Applications

ELISA Detector	0.1-0.4 µg/mL
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Data



Sandwich ELISA-Recombinant Human Leptin/OB protein standard curve. Background subtracted standard curve using

Leptin/OB antibody(AN001420P)(Capture), Leptin/OB antibody(AN001430P)(Detector) in sandwich ELISA. The reference range value for Recombinant Human Leptin/OB protein is 31.25-20000 pg/mL.

Preparation & Storage

Storage	Store at 4°C valid for 12 months or -20°C valid for long term storage, avoid freeze / thaw cycles.
Shipping	The product is shipped with ice pack, upon receipt, store it immediately at the temperature recommended.

Background

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Key player in the regulation of energy balance and body weight control. Once released into the circulation, has central and peripheral effects by binding LEPR, found in many tissues, which results in the activation of several major signaling pathways. 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. 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. 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. 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. 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 ability of NK cells.

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