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PRODUCT DATASHEET

Anti-Leptin Antibody

Product Details

Available Variants	100 uL (SKU:ABS 022-03-010) 400 uL (SKU:ABS 022-03-04) 1000 uL (SKU:ABS 022-03-1)
Conjugate	Unconjugated
Isotype	IgG1/k
Clone	3
Gene Name	LEP
Host Species	Mouse
Concentration	1 mg/mL ±15%
Format	Protein A or Protein G purified
Physical State	Liquid
Buffer	0.01 M phosphate buffer, pH 7.4, with 0.5 M NaCl and 15 mM sodium azide
Production Notes	BSA free
Applications	ELISA, IHC
Species Reactivity	Human
Immunogen	Recombinant human leptin
Specificity	ABS 022-03 binds human leptin. The epitope of ABS 022-03 differs from the epitope of ABS 022-11 but overlaps with the epitope of ABS 022-06.
Molecular Weight	16 kDa
Storage	2-8°C without exposure to light
UniProt ID	P41159 UniProt Summary: 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 (PubMed:15899045, PubMed:17344214,

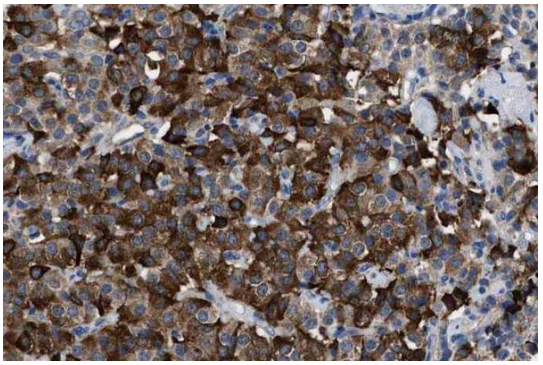
PubMed:19688109). In the hypothalamus, acts as an appetite-regulating factor that induces a decrease in food intake and an increase in energy consumption by inducing anorexinogenic factors and suppressing orexigenic neuropeptides, also regulates bone mass and secretion of hypothalamo-pituitary-adrenal 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) (PubMed:11460888, PubMed:19688109, PubMed:24340098, PubMed:25060689, PubMed:8589726). 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 (PubMed:24340098). 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) (PubMed:17344214). May also play an apoptotic role via JAK2-STAT3 pathway and up-regulation of BIRC5 expression (PubMed:18242580). 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) (PubMed:11460888). 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 (PubMed:12504075). Plays a pro-inflammatory role, in synergy with IL1B, by inducing NOS2 which promotes the production of IL6, IL8 and Prostaglandin E2, through a signaling pathway that involves JAK2, PI3K, MAP2K1/MEK1 and MAPK14/p38 (PubMed:15899045, PubMed:19688109). In adaptive immunity, promotes the switch of memory T-cells towards T helper-1 cell immune responses (By similarity). Increases CD4(+)CD25(-) T-cell proliferation and reduces autophagy during TCR (T-cell receptor) stimulation, through MTOR signaling pathway activation and BCL2 up-regulation (PubMed:25060689). {ECO:0000250|UniProtKB:P41160, ECO:0000250|UniProtKB:P50596, ECO:0000269|PubMed:11460888, ECO:0000269|PubMed:12504075, ECO:0000269|PubMed:15899045, ECO:0000269|PubMed:17344214, ECO:0000269|PubMed:18242580, ECO:0000269|PubMed:19688109, ECO:0000269|PubMed:24340098, ECO:0000269|PubMed:25060689, ECO:0000269|PubMed:8589726, ECO:0000305|PubMed:15122202, ECO:0000305|PubMed:25232147}.

Country of Origin United States

Shipping Shipped on ice packs

Expiration	24 months from date of receipt
Usage Statement	These antibodies are to be used as research laboratory reagents and are not for use as diagnostic or therapeutic reagents in humans.
NCBI Gene ID	3952

Product Images



Immunohistochemistry detection of Leptin in human malignant carcinoid tissue using Anti-Leptin Antibody (Cat.ABS 022-03-010). Tissue was mounted and pariffin fixed. Heat induced antigen retrieval was performed using citrate buffer, heated, and then blocked. After washing, the primary antibody (Cat.ABS 022-03-010) was incubated with the sample.