

Anti-Leptin (RABBIT) Antibody
Leptin Antibody
Catalog # ASR5005**Specification**

Anti-Leptin (RABBIT) Antibody - Product Information

Host	Rabbit
Conjugate	Unconjugated
Target Species	Mouse
Reactivity	Human, Mouse
Clonality	Polyclonal
Application	WB, IHC, E, I, LCI
Application Note	This IgG fraction of anti-Mouse Leptin was tested for use in ELISA and immunoblotting. Reactivity in other immunoassays is unknown. The antibody will recognize recombinant and native 16 kDa leptin from mouse and human.
Physical State	Liquid (sterile filtered)
Buffer	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Immunogen	Anti-Leptin antibody was prepared by repeated immunizations with recombinant mouse leptin 16,000 MW produced in E. coli.
Preservative	0.01% (w/v) Sodium Azide

Anti-Leptin (RABBIT) Antibody - Additional Information**Gene ID** 16846**Other Names**
16846**Purity**

Anti-Leptin antibody is an IgG fraction antibody purified from monospecific antiserum by a multi-step process which includes delipidation, salt fractionation and ion exchange chromatography followed by extensive dialysis against the buffer stated above. The antibody will recognize leptin from mouse and human. Reactivity with leptin from other sources is unknown.

Storage Condition

Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.

Precautions Note

This product is for research use only and is not intended for therapeutic or diagnostic applications.

Anti-Leptin (RABBIT) Antibody - Protein Information

Name Lep

Synonyms Ob

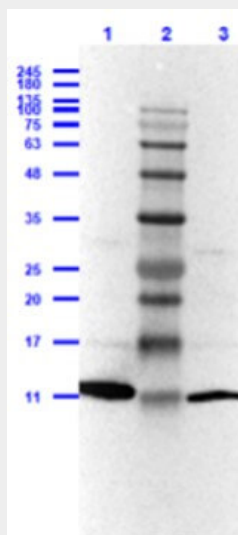
Function

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:11373681, PubMed:12594516, PubMed:15899045, PubMed:16825198, PubMed:20620997). 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) (PubMed:10660043, PubMed:12594516, PubMed:25060689, PubMed:25383904, PubMed:8589726, PubMed:9732873). 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) (PubMed:11373681, PubMed:20620997). 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 (By similarity) (PubMed:16825198, PubMed:20620997). May also play an apoptotic role via JAK2-STAT3 pathway and up-regulation of BIRC5 expression (By similarity). 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:16825198). 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 (Probable). 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). In adaptive immunity, promotes the switch of memory T-cells towards T helper-1 cell immune responses (By similarity). Increases CD4(+)CD25(-) T cells proliferation and reduces autophagy during TCR (T cell receptor) stimulation, through MTOR signaling pathway activation and BCL2 up-regulation (PubMed:25060689).

Cellular Location
Secreted.**Anti-Leptin (RABBIT) Antibody - Protocols**

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

Anti-Leptin (RABBIT) Antibody - Images

Western Blot Results of Rabbit Anti-Leptin Antibody. Lane 1: Rec Ms Leptin Reduced [0.03 µg]. Lane 2: Opal Prestained Molecular Weight Marker (p/n MB-210-0500). Lane 3: Rec Ms Leptin Non-Reduced [0.03 µg]. Primary Antibody: Rb Anti-Leptin at 1:1000 overnight at 2-8°C. Secondary Antibody: Gt Anti-Rabbit IgG [H&L] HRP (p/n 611-1302) at 1:40,000 for 30 mins at RT. Blocking: Universal BlockOut Buffer (p/n MB-073) for 1hr at RT. Predicted MW: ~16kDa. Exposure: 5sec.

Anti-Leptin (RABBIT) Antibody - Background

Anti-Leptin antibody detects leptin protein. Leptin may function as part of a signaling pathway that acts to regulate the size of the body fat depot. An increase in the level of LEP may act directly or indirectly on the CNS to inhibit food intake and/or regulate energy expenditure as part of a homeostatic mechanism to maintain constancy of the adipose mass. Obesity associated leptin is the product of the OB gene and has been identified with Type II diabetes. Anti-leptin Antibody is ideal for investigators involved in Cell Signaling, Obesity research, aging research and Signal Transduction research.