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Leptin Receptor Antibody
Rabbit Polyclonal Antibody
Catalog # ABV11012

Specification

Leptin Receptor Antibody - Product Information

Application	**WB**
Primary Accession	P48356
Reactivity	**Mouse**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**130789**

Leptin Receptor Antibody - Additional Information

Gene ID 16847

Application & Usage: **Western blot analysis (0.5-2 µg/ml). However, the optimal conditions should be determined individually.**

Other Names
LEP; OB; OBS; Obese Protein

Target/Specificity
Leptin-R

Antibody Form
Liquid

Appearance
Colorless liquid

Formulation
100 µg (0.5 mg/ml) affinity purified rabbit anti-mouse Leptin Receptor polyclonal antibody in phosphate buffered saline (PBS), pH 7.2, containing 50% glycerol, 1% BSA, 0.02% sodium azide.

Handling
The antibody solution should be gently mixed before use.

Reconstitution & Storage
-20 °C

Background Descriptions

Precautions
Leptin Receptor Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Leptin Receptor Antibody - Protein Information

Name Lepr

Synonyms Db, Obr

Function
Receptor for hormone LEP/leptin (Probable) (PubMed:11861497). On ligand binding, mediates LEP central and peripheral effects through the activation of different signaling pathways such as JAK2/STAT3 and MAPK cascade/FOS (PubMed:10799542, PubMed:25383904, PubMed:11923481, PubMed:11861497). In the hypothalamus, LEP 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 (PubMed:10660043, PubMed:12594516). In the periphery, increases basal metabolism, influences reproductive function, regulates pancreatic beta-cell function and insulin secretion, is pro-angiogenic and affects innate and adaptive immunity (PubMed:25383904, PubMed:11923481). Control of energy homeostasis and melanocortin production (stimulation of POMC and full repression of AgRP transcription) is mediated by STAT3 signaling, whereas distinct signals regulate NPY and the control of fertility, growth and glucose homeostasis (PubMed:12594516). Involved in the regulation of counter-regulatory response to hypoglycemia by inhibiting neurons of the parabrachial nucleus (PubMed:25383904). Has a specific effect on T lymphocyte responses, differentially regulating the proliferation of naive and memory T-cells. Leptin increases Th1 and suppresses Th2 cytokine production (PubMed:9732873).

Cellular Location
Cell membrane {ECO:0000250|UniProtKB:P48357}; Single-pass type I membrane protein {ECO:0000250|UniProtKB:P48357} Basolateral cell membrane {ECO:0000250|UniProtKB:P48357}

Tissue Location
Isoform A: highest level of expression in lung and kidney, also present in heart, brain, spleen, liver, muscle, choroid plexus and hypothalamus. Isoform B: highest levels of expression in hypothalamus and lower levels in brain, testes and adipose tissue Expressed by neurons of the parabrachial nucleus (PubMed:25383904) Expressed by peripheral blood mononuclear cells and CD4(+) T-cells (PubMed:9732873). Isoform E: expressed in adipose tissue, liver, hypothalamus, cerebral microvessels, heart, and testes (PubMed:17620316).

Leptin Receptor 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 Cytomety
- Cell Culture

Leptin Receptor Antibody - Images

Leptin Receptor Antibody - Background

Leptin is a recently identified protein product of the mouse obese gene. Mice with mutations in the obese gene that block the synthesis of leptin have been found to be obese and diabetic and to have reduced activity, metabolism and body temperature. cDNA clones encoding leptin have been isolated from human, simian, mouse and rat cells. Human leptin shares approximately 84% sequence identity with the mouse protein. Human Leptin cDNA encodes a 167 amino acide residue protein with a 21 amino acid residue signal sequence that is cleaved to yield the 146 amino acid residue mature protein. The expression of leptin mRNA has been shown to be restricted to adipose tissue. Leptin plays an important role in reproduction, immunological response and neuroendocrine signaling.