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Leptin Receptor (LEPR) Antibody (N-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP6151a

Product Information

Application	WB, FC, IHC-P, E
Primary Accession	P48357
Other Accession	NP_002294
Reactivity	Human, Rat, Mouse
Predicted	Canine, Rabbit
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	132494
Antigen Region	23-52

Additional Information

Gene ID	3953
Other Names	Leptin receptor, LEP-R, HuB219, OB receptor, OB-R, CD295, LEPR, DB, OBR
Target/Specificity	This Leptin Receptor (LEPR) antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 23-52 amino acids from the N-terminal region of human Leptin Receptor (LEPR).
Dilution	WB~~1:1000 FC~~1:10~50 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	Leptin Receptor (LEPR) Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	LEPR
Synonyms	DB, OBR
Function	Receptor for hormone LEP/leptin (Probable) (PubMed: 22405007). On ligand

	binding, mediates LEP central and peripheral effects through the activation of different signaling pathways such as JAK2/STAT3 and MAPK cascade/FOS. 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 (By similarity) (PubMed:9537324). 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:12504075, PubMed:25060689, PubMed:8805376). 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. Involved in the regulation of counter-regulatory response to hypoglycemia by inhibiting neurons of the parabrachial nucleus. Has a specific effect on T lymphocyte responses, differentially regulating the proliferation of naive and memory T -ells. Leptin increases Th1 and suppresses Th2 cytokine production (By similarity).
Cellular Location	Cell membrane; Single-pass type I membrane protein. Basolateral cell membrane
Tissue Location	Isoform A is expressed in fetal liver and in hematopoietic tissues and choroid plexus. In adults highest expression in heart, liver, small intestine, prostate and ovary. Low level in lung and kidney. Isoform B is highly expressed in hypothalamus, but also in skeletal muscle. Detected in fundic and antral epithelial cells of the gastric mucosa (PubMed:19159218). Isoform B and isoform A are expressed by NK cells (at protein level) (PubMed:12504075)

Background

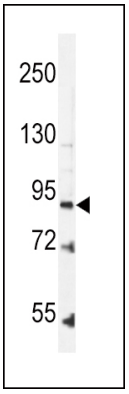
Leptin, an adipocyte-specific hormone, regulates adipose-tissue mass through hypothalamic effects on satiety and energy expenditure by acting through the leptin receptor (LEPR). LEPR is a single-transmembrane-domain receptor of the cytokine receptor family that is identical to the mouse diabetes (db) gene product. During weight loss, leptin levels decrease, whereas soluble LEPR levels and the receptor bound fraction of leptin increases. The presence of LEPR in the absorptive cells of the small intestine suggests that leptin may have a physiological role in the regulation of nutrient absorption.

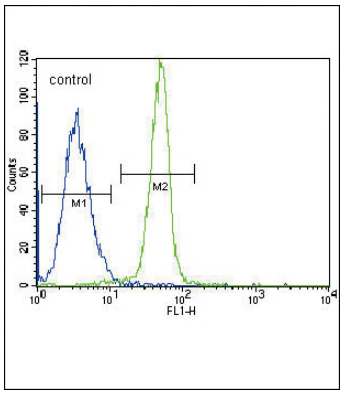
References

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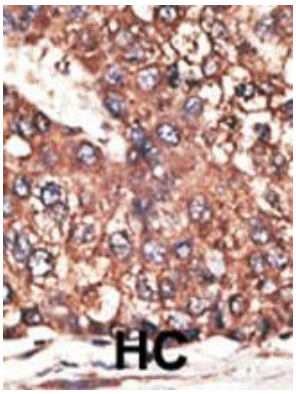
Images

Leptin Receptor (LEPR) Antibody (N-term)(Cat. #AP6151a) western blot analysis in K562 cell line lysates (35ug/lane).This demonstrates the LEPR antibody detected the LEPR protein (arrow).





Leptin Receptor (LEPR) Antibody (N-term) (Cat. #AP6151a) flow cytometric analysis of K562 cells (right histogram) compared to a negative control cell (left histogram).FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.



Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.