

Anti-Leptin Receptor Antibody

Catalog # ABO10063

Product Information

Application	IHC-P, E
Primary Accession	P48357
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for Leptin receptor(LEPR) detection. Tested with IHC-P, ELISA in Human;Mouse;Rat.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Gene ID	3953
Other Names	Leptin receptor, LEP-R, HuB219, OB receptor, OB-R, CD295, LEPR, DB, OBR
Calculated MW	132494
Application Details	Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml, Mouse, Rat, Human, By Heat ELISA , 0.1-0.5 µg/ml, Human
Subcellular Localization	Cell membrane; Single-pass type I membrane protein.
Tissue Specificity	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.
Source	Eukaryota
Protein Name	Leptin receptor
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na ₂ HPO ₄ , 0.05mg NaN ₃ .
Immunogen	A synthetic peptide corresponding to a sequence at the C-terminus of human Leptin Receptor (793-839aa KKKYYIHDHFIPIEKYQFSLYPIFMEGVGKPKIINSFTQDDIEKHQSD), different from the related mouse sequence by nine amino acids, and from the related rat sequence by eig

Purification	Immunogen affinity purified.
Cross Reactivity	No cross reactivity with other proteins
Storage	At -20 °C for one year. After reconstitution, at 4 °C for one month. It can also be aliquotted and stored frozen at -20 °C for a longer time. Avoid repeated freezing and thawing.

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 anorexigenic 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-cells. 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 receptor, also known as LEP-R or OB-R is a protein that in humans is encoded by the LEPR gene. The protein encoded by this gene belongs to the gp130 family of cytokine receptors that are known to stimulate gene transcription via activation of cytosolic STAT proteins. This protein is a receptor for leptin (an adipocyte-specific hormone that regulates body weight), and is involved in the regulation of fat metabolism, as well as in a novel hematopoietic pathway that is required for normal lymphopoiesis. Mutations in this gene have been associated with obesity and pituitary dysfunction. Alternatively spliced transcript variants encoding different isoforms have been described for this gene.

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