Mouse Leptin R Antibody

Antigen Affinity-purified Polyclonal Goat IgG

Catalog Number: AF497

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse Leptin R in direct ELISAs and Western blots. In direct ELISAs, approximately 30% cross-reactivity with recombinant human Leptin R is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse Leptin R Ala20-Gly839 Accession # Q3US58
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 μm filtered solution in PBS.

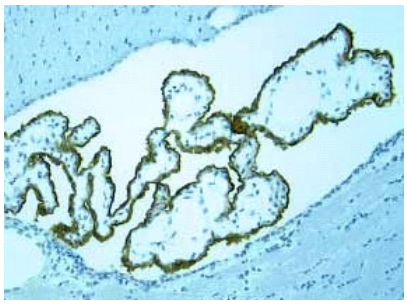
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Western Blot	0.1 µg/mL	Recombinant Mouse Leptin R Fc Chimera (Catalog # 497-LR)
Flow Cytometry	2.5 µg/10^6 cells	Mouse splenocytes
Immunohistochemistry	5-15 µg/mL	See Below

DATA

Immunohistochemistry



Leptin R in Rat Brain. Leptin R was detected in perfusion fixed frozen sections of rat brain using 15 µg/mL Goat Anti-Mouse Leptin R Antigen Affinity-purified Polyclonal Antibody (Catalog # AF497) overnight at 4 °C. Tissue was stained with the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). Specific labeling was localized to the cytoplasm of cells in the choroid plexus. View our protocol for Chromogenic IHC Staining of Frozen Tissue Sections.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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BACKGROUND

Leptin receptor (OB-R), also named B219, is a type I cytokine receptor family protein with significant amino acid sequence identity with gp130, G-CSF receptor, and the LIF receptor. Multiple isoforms of human and mouse OB-R, including a long form (OB-R_L) with a large cytoplasmic domain capable of signal-transduction, and several receptor isoforms with short cytoplasmic domains (OB-R_s) lacking signal-transducing capabilities, have been identified. The extracellular domains of the short and long forms of OB-R are identical. An OB-R transcript lacking a transmembrane domain and potentially encoding a soluble form of the receptor has also been described. Circulating soluble OB-R, complexed to leptin, has been detected in mouse serum. Serum soluble OB-R levels have been shown to increase during pregnancy. OB-R_L transcripts were reported to be expressed predominantly in regions of the hypothalamus previously thought to be important in body weight regulation. Expression of OB-R_s transcripts have been found in multiple tissues, including the choroid plexus, lung, kidney and primitive hematopoietic cell populations. OB-R has recently been shown to be encoded by the mouse diabetes (*db*) and rat fatty (*fa*) genes. Rodents homozygous for the *db* or *fa* mutations have been known to exhibit an obesity phenotype.

Mouse OB-R long form encodes a 1162 amino acid (aa) residue precursor protein with a 22 aa residue signal peptide, an 817 aa residue extracellular domain, a 21 aa residue transmembrane domain, and a 302 aa residue cytoplasmic domain. The extracellular domain of OB-R contains two hemopoietin receptor domains, a fibronectin type III domain and the WSXWS domain. Recombinant murine soluble OB-R has been shown to bind leptin with high affinity and is a potent leptin antagonist.

References:

1. Tartaglia, L.A. *et al.* (1995) Cell **83**:1263.
2. Cioffi, J.A. *et al.* (1996) Nature Medicine **2**:585.
3. Lee, J.I. and J.M. Friedman (1996) Nature **379**:632.
4. Tartaglia, L.A. (1997) J. Biol. Chem. **272**:6093.
5. Gavrilova, O. *et al.* (1997) J. Biol. Chem. **272**:30546.