Mouse Leptin/OB Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF498

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse Leptin/OB in ELISAs and Western blots. In sandwich ELISAs, approximately 40% cross-reactivity with recombinant rat Leptin/OB is observed and less than 0.2% cross-reactivity with recombinant human Leptin/OB is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	*E. coli*-derived recombinant mouse Leptin/OB Val22-Cys167 Accession # Q544U0
Endotoxin Level	<0.10 EU per 1 µg of the antibody by the LAL method.
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 either lyophilized or as a 0.2 µm filtered solution in PBS.

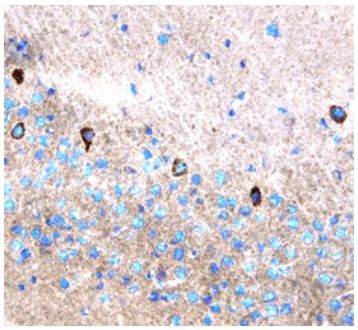
APPLICATIONS

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/OB (Catalog # 498-OB)
Immunohistochemistry	5-15 µg/mL	See Below
Mouse Leptin/OB Sandwich Immunoassay		**Reagent**
ELISA Capture	0.2-0.8 µg/mL	Mouse Leptin/OB Antibody (Catalog # AF498)
ELISA Detection	0.1-0.4 µg/mL	Mouse Leptin/OB Biotinylated Antibody (Catalog # BAF498)
Standard		Recombinant Mouse Leptin/OB (Catalog # 498-OB)
Neutralization	Measured by its ability to neutralize Leptin/OB-induced proliferation in the BaF3 mouse pro-B cell line transfected with human Leptin R. The Neutralization Dose (ND_{50}) is typically 0.05-0.3 µg/mL in the presence of 2.5 ng/mL Recombinant Mouse Leptin/OB.	

DATA

Immunohistochemistry



Leptin/OB in Mouse Brain. Leptin/OB was detected in perfusion fixed frozen sections of mouse brain using Mouse Leptin/OB Antigen Affinity-purified Polyclonal Antibody (Catalog # AF498) at 5 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). Specific staining was localized to neuronal cytoplasm. 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 is a 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. Mouse Leptin shares approximately 96% and 84% sequence identity with the rat and human protein, respectively. Mouse Leptin cDNA encodes a 167 amino acid 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.

A high-affinity receptor for Leptin (OB-R) with homology to gp130 and the G-CSF receptor has been cloned. OB-R mRNA has been shown to be expressed in the choroid plexus and in the hypothalamus. OB-R has also been identified as an isoform of B219, a sequence that is expressed in at least four isoforms in very primitive hematopoietic cell populations and in a variety of lymphohematopoietic cell lines (1-3). The possible roles of Leptin in body weight regulation, hematopoiesis and reproduction are being investigated.

References:

1. Considine, R. and J. Caro (1996) Clinical Chemistry **42**:843.
2. Tartaglia, L.A. *et al.* (1995) Cell **83**:1263.
3. Cioffi, J.A. *et al.* (1996) Nature Medicine **2**:585.

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