DESCRIPTION
Species Reactivity Mouse
Specificity Detects mouse Leptin R in ELISAs and Western blots.
Source Polyclonal Goat IgG
Purification Antigen Affinity-purified
Immunogen Mouse myeloma cell line NS0-derived recombinant mouse Leptin R Aaa20-Gly839
Accession # Q3US58
Formulation Lyophilized from a 0.2 μm filtered solution in PBS with BSA as a carrier protein. See Certificate of Analysis for details.

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

Mouse Leptin R Sandwich Immunoassay
ELISA Capture 2-8 μg/mL Mouse Leptin R Antibody (Catalog # MAB497)
ELISA Detection 0.1-0.4 μg/mL Mouse Leptin R Biotinylated Antibody (Catalog # BAF497)
Standard Recombinant Mouse Leptin R Fc Chimera (Catalog # 497-LR)

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.
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.

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_s 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, 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: