

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Leptin R in direct ELISAs.
Source	Recombinant Monoclonal Mouse IgG _{2B} Clone # 52239R
Purification	Protein A or G purified from cell culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Leptin R Phe22-Asp839 Accession # P48357
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.

ELISA	This antibody functions as an ELISA capture antibody when paired with human anti-Leptin R Monoclonal Antibody (Catalog # MAB86713). This product is intended for assay development on various assay platforms requiring antibody pairs. We recommend the Human Leptin R DuoSet ELISA (Catalog # DY389) for convenient development of a sandwich ELISA.
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PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 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. <ul style="list-style-type: none"> • 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. 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 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. Human OB-R long form encodes a 1165 amino acid (aa) precursor protein with a 22 aa signal peptide, an 819 aa extracellular domain, a 21 aa transmembrane domain and a 303 aa cytoplasmic domain. The extracellular domain of OB-R contain two hemopoietin receptor domains, a fibronectin type III domain and the WSXWS domain. Recombinant 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. Tartaglia, L.A. (1997) J. Biol. Chem. **272**:6093.