

# Human Leptin R Alexa Fluor® 750-conjugated Antibody

Monoclonal Rat IgG<sub>2A</sub> Clone # 55305

Catalog Number: FAB497S

100 µg

## DESCRIPTION

<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects mouse Leptin R in ELISAs.
<b>Source</b>	Monoclonal Rat IgG <sub>2A</sub> Clone # 55305
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	Mouse myeloma cell line NS0-derived recombinant mouse Leptin R Leu21-Leu840 (predicted) Accession # P48356
<b>Conjugate</b>	Alexa Fluor 750 Excitation Wavelength: 749 nm Emission Wavelength: 775 nm
<b>Formulation</b>	Supplied 0.2 mg/mL in a saline solution containing BSA and Sodium Azide.  *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

## 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.

	<b>Recommended Concentration</b>	<b>Sample</b>
<b>Flow Cytometry</b>	0.25-1 µg/10 <sup>6</sup> cells	HEK293 human cell line transfected with mouse Leptin R and EGFP

## PREPARATION AND STORAGE

<b>Shipping</b>	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
<b>Stability &amp; Storage</b>	<b>Protect from light. Do not freeze.</b> • 12 months from date of receipt, 2 to 8 °C as supplied.

## 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<sub>L</sub>) with a large cytoplasmic domain capable of signal-transduction, and several receptor isoforms with short cytoplasmic domains (OB-R<sub>S</sub>) 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<sub>L</sub> 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<sub>S</sub> transcripts have been found in multiple tissues, including the choroid plexus, lung, kidney and primitive hematopoietic cell populations. OB-R is 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 binds 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.

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