

## Rabbit Anti-Leptin receptor antibody

SL0410R

**Product Name** Leptin receptor

**Chinese Name** 瘦素受体抗体

**Alias** obI; CD 295; CD295; CD295 antigen; Db; Fa; HuB219; LEP R; LEPR; LEPROT; Leptin receptor fatty; Leptin receptor gene related protein; Leptin receptor precursor; OB R; OB-R; OB R gene related protein; OB receptor; OB-RGRP; Obr; Ob-R a/b/c/d/e; LEPRD; Leptin receptor.

**Research Area** immunology Neurobiology The cell membrane 受体

**Immunogen Species** Rabbit

**Clonality** Polyclonal

**React Species** Human,Mouse,Rat (predicted:Horse,Sheep,Goat)  
WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500,Flow-Cyt=2ug/Test  
(Paraffin sections need antigen repair)

**Applications** not yet tested in other applications.  
optimal dilutions/concentrations should be determined by the end user.

**Theoretical molecular weight** 26kDa

**Cellular localization** The cell membrane Secretory protein

**Form** Liquid

**Concentration** 1mg/ml

**immunogen** KLH conjugated synthetic peptide derived from human Leptin receptor: 101-180/262

**Lsotype** IgG

**Purification** affinity purified by Protein A

**Buffer Solution** 1M TBS(pH7.4) with 1% BSA, 3% Proclin300 and 50% Glycerol.

**Storage** Shipped at 4°C. Store at -20 °C for one year. Avoid repeated freeze/thaw cycles.

**Attention** This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

## PubMed

### [PubMed](#)

The protein encoded by this gene belongs to the gp130 family of cytokine receptors that are known to stimulate gene transcription via activation of cytosolic STAT proteins. This protein is a receptor for leptin (an adipocyte-specific hormone that regulates body weight), and is involved in the regulation of fat metabolism, as well as in a novel hematopoietic pathway that is required for normal lymphopoiesis. Mutations in this gene have been associated with obesity and pituitary dysfunction. Alternatively spliced transcript variants encoding different isoforms have been described for this gene. It is noteworthy that this gene and LEPROT gene (GeneID:54741) share the same promoter and the first 2 exons, however, encode distinct proteins (PMID:9207021).[provided by RefSeq, Nov 2010]

### **Function:**

Receptor for obesity factor (leptin). On ligand binding, mediates signaling through JAK2/STAT3. Involved in the regulation of fat metabolism and, in a hematopoietic pathway, required for normal lymphopoiesis. May play a role in reproduction. Can also mediate the ERK/FOS signaling pathway.

### **Subunit:**

On leptin stimulation, homodimerizes. The phosphorylated receptor binds a number of SH2 domain-containing proteins such as STAT3, PTPN11, and SOCS3. Interaction with SOCS3 inhibits LRb signaling.

## Product Detail

### **Subcellular Location:**

Cell membrane; Single-pass type I membrane protein. Isoform E: Secreted (Probable).

### **Tissue Specificity:**

Isoform A is expressed in fetal liver and in hematopoietic tissues and choroid plexus. In adults highest expression in heart, liver, small intestine, prostate and ovary. Low level in lung and kidney. Isoform B is highly expressed in hypothalamus.

### **Post-translational modifications:**

On ligand binding, phosphorylated on two conserved C-terminal tyrosine residues (isoform B only) by JAK2. Tyr-986 is required for complete binding and activation of PTPN11, ERK/FOS activation and, for interaction with SOCS3. Phosphorylation on Tyr-1141 is required for STAT3 binding/activation.

### **Similarity:**

Belongs to the type I cytokine receptor family. Type 2 subfamily.  
Contains 4 fibronectin type-III domains.  
Contains 1 Ig-like (immunoglobulin-like) domain.

### **SWISS:**

P48357

**Gene ID:**

3953

**Database links:**

[Entrez Gene: 3953](#) Human

[Entrez Gene: 16847](#) Mouse

[Entrez Gene: 24536](#) Rat

[Omim: 601007](#) Human

[SwissProt: P48357](#) Human

[SwissProt: P48356](#) Mouse

[SwissProt: Q62959](#) Rat

[Unigene: 23581](#) Human

[Unigene: 723178](#) Human

[Unigene: 259282](#) Mouse

[Unigene: 9891](#) Rat

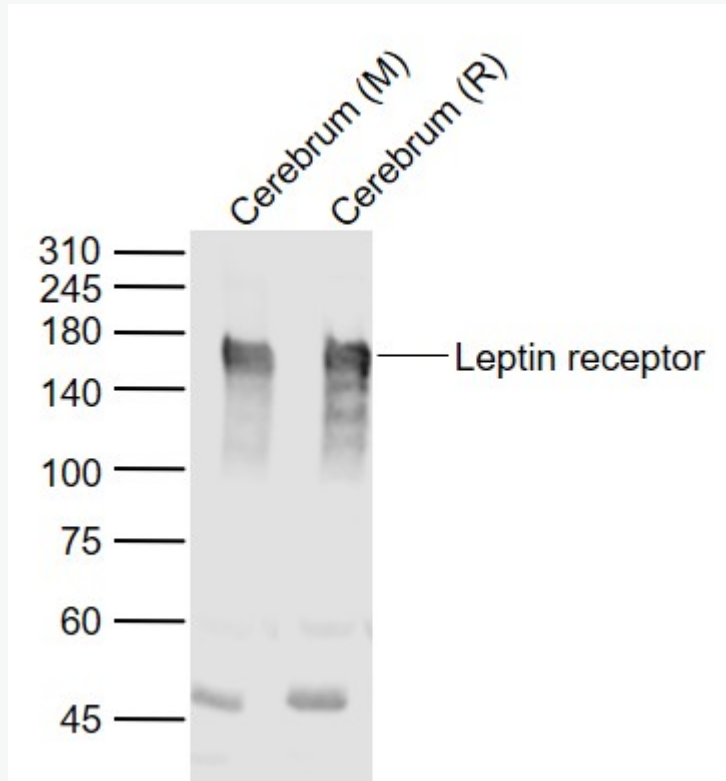
Leptin 是一种分子量为 16kDa 的脂肪组织源激素，由脂肪细胞分泌的，具有强亲水性，以单体形式存在于血浆中。

Leptin 具有广泛的生物学效应，作用于下丘脑，调节食欲、能量代谢及体重。Leptin 还可能作为脂肪-胰岛内分泌轴一部分，参与胰岛素分泌的调节。Leptin receptor

(OB-R)是与 gp130 最密切相关的 Signal transduction 的共同成分,属 1 类 cell factor 超家族，下丘脑有丰富的 Leptin receptor，在其它部位也有分布，但水平较低：如胰岛素 B 细胞；脉络丛；肝、肺、心、肾、睾丸、lymphocyte 和脂肪细胞中。

人类存在四个异性体，均为单跨膜受体。其中 OB-Rb 在胞内结构域最长，是唯一能进行信号传导并调节热量摄入和能量消耗的异性体。

**Product  
Picture**



Sample:

Lane 1: Cerebrum (Mouse) Lysate at 40 ug

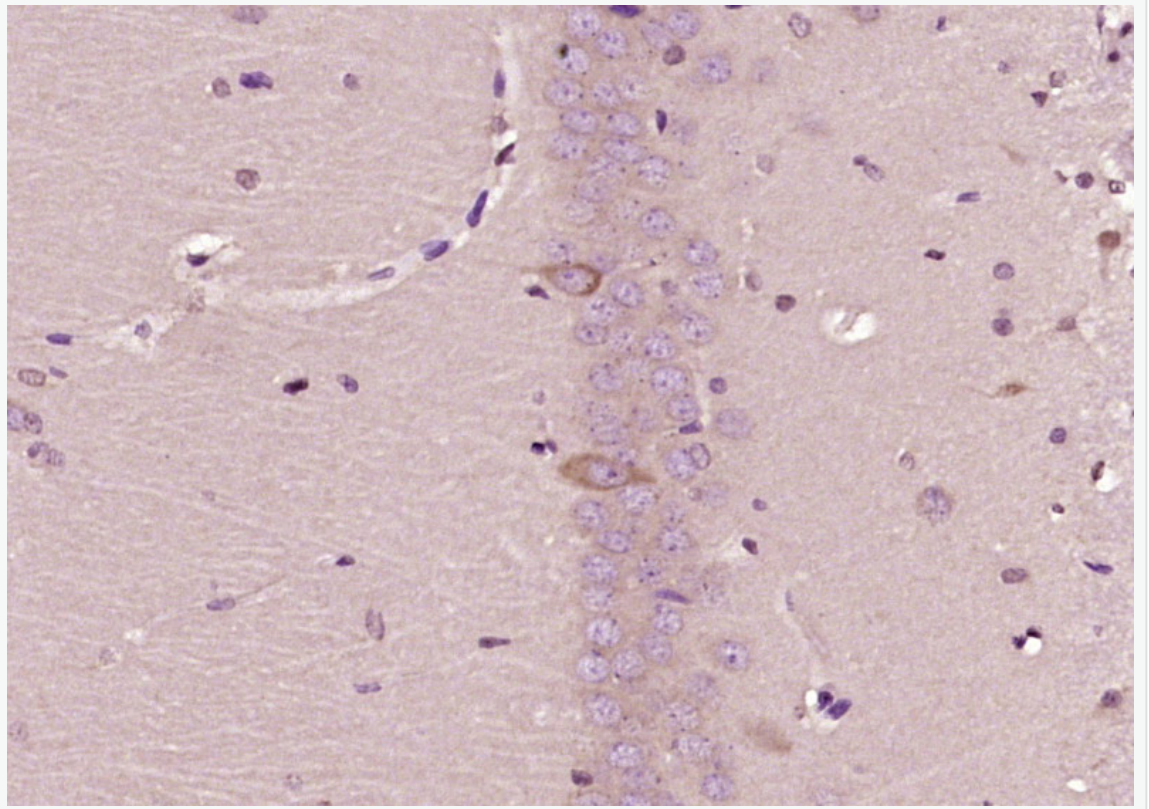
Lane 2: Cerebrum (Rat) Lysate at 40 ug

Primary: Anti-Leptin receptor (SL0410R) at 1/1000 dilution

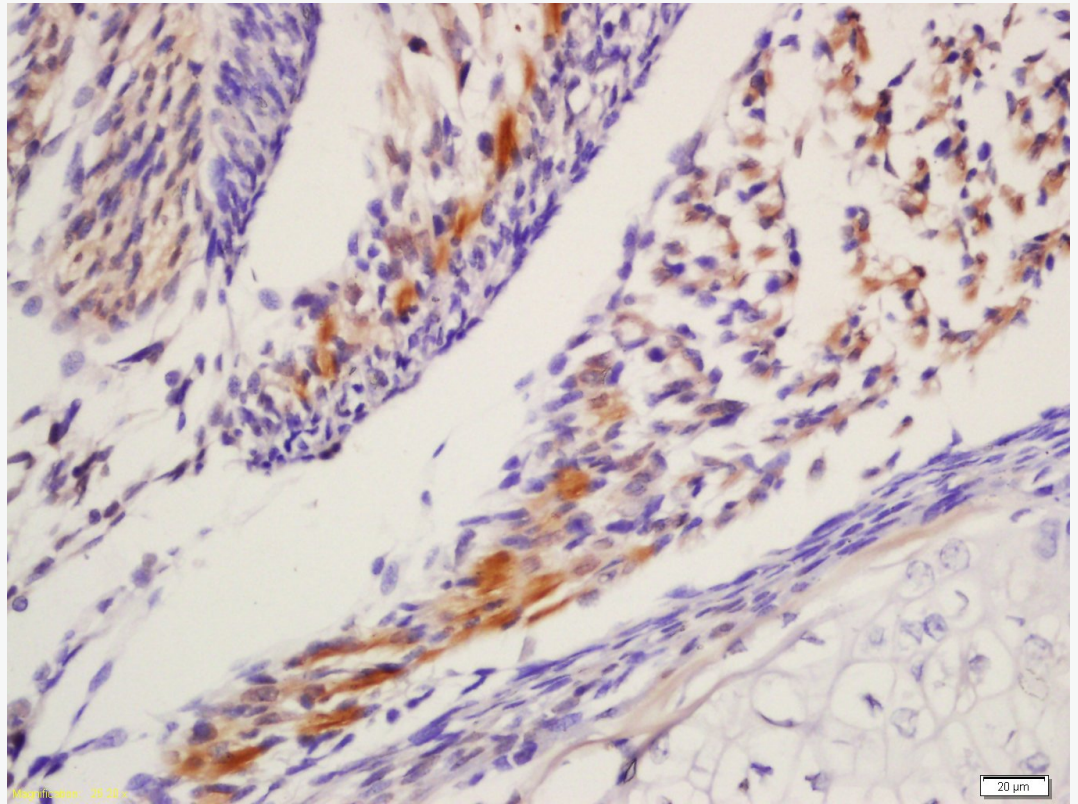
Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 150 kD

Observed band size: 150 kD



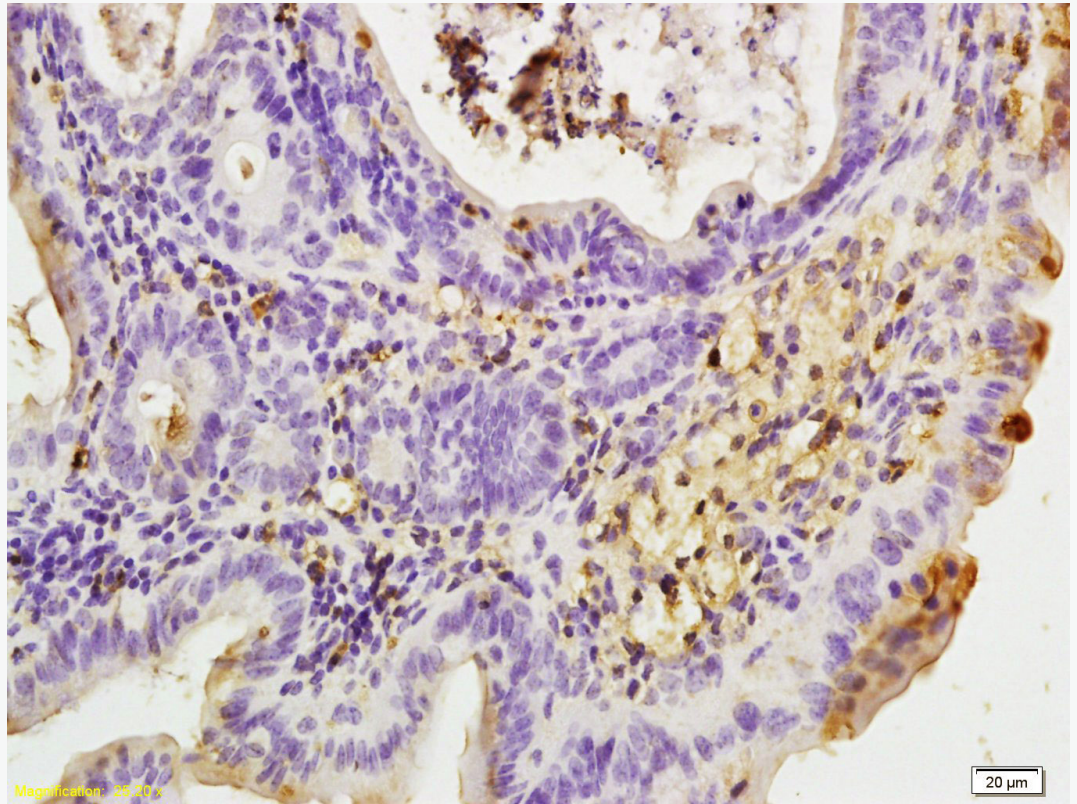
Paraformaldehyde-fixed, paraffin embedded (Rat brain); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (Leptin receptor) Polyclonal Antibody, Unconjugated (SL0410R) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructions and DAB staining.



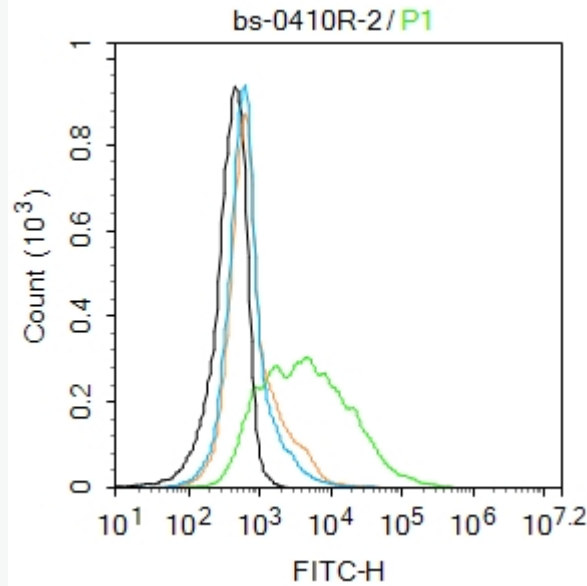
Tissue/cell: Mouse Embryo tissue; 4% Paraformaldehyde-fixed and paraffin-embedded;

Antigen retrieval: citrate buffer ( 1M, pH 6.0 ), Boiling bathing for 15min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer (normal goat serum,C-0005) at 37°C for 20 min;

Incubation: Anti-Leptin receptor Polyclonal Antibody, Unconjugated(SL0410R) 1:200, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining



Tissue/cell: rat colon tissue; 4% Paraformaldehyde-fixed and paraffin-embedded;  
Antigen retrieval: citrate buffer ( 1M, pH 6.0 ), Boiling bathing for 15min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer (normal goat serum,C-0005) at 37°C for 20 min;  
Incubation: Anti-Leptin receptor Polyclonal Antibody, Unconjugated(SL0410R) 1:200, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining



Blank control: K562.

Primary Antibody (green line): Rabbit Anti-Leptin receptor antibody (SL0410R)

Dilution: 2 $\mu$ g /10<sup>6</sup> cells;

Isotype Control Antibody (orange line): Rabbit IgG .

Secondary Antibody : Goat anti-rabbit IgG-AF488

Dilution: 1 $\mu$ g /test.

#### Protocol

The cells were incubated in 5%BSA to block non-specific protein-protein interactions for 30 min at room temperature .Cells stained with Primary Antibody for 30 min at room temperature. The secondary antibody used for 40 min at room temperature.

Acquisition of 20,000 events was performed.