

## Product datasheet for **TA396596S**

### Lep Rabbit Polyclonal Antibody

#### Product data:

Product Type:	Primary Antibodies
Applications:	ELISA, WB
Recommended Dilution:	<b>WB:</b> 1:500 - 1:2,000 <b>ELISA:</b> 1:1,000 - 1:5,000
Reactivity:	Human, Mouse
Host:	Rabbit
Clonality:	Polyclonal
Immunogen:	This whole rabbit serum was prepared by repeated immunizations with recombinant mouse leptin 16,000 MW produced in E. coli.
Specificity:	This antiserum has been heated to 56°C for 30 minutes. The antibody will recognize recombinant and native 16 kDa leptin from mouse and human. Reactivity with leptin from other sources is unknown.
Formulation:	None
Concentration:	85 mg/mL - lot specific
Conjugation:	Unconjugated
Storage:	Store vial at -20° C or below prior to opening. This vial contains a relatively low volume of reagent (25 µL). To minimize loss of volume dilute 1:10 by adding 225 µL of the buffer stated above directly to the vial. Recap, mix thoroughly and briefly centrifuge to collect the volume at the bottom of the vial. Use this intermediate dilution when calculating final dilutions as recommended below. Store the vial at -20°C or below after dilution. Avoid cycles of freezing and thawing.
Stability:	Expiration date is one (1) year from date of receipt.
Gene Name:	leptin
Database Link:	<a href="#">Entrez Gene 16846 Mouse P41160</a>



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**Background:**

Leptin is a key player in the regulation of energy balance and body weight control. Obesity associated leptin is the product of the OB gene and has been identified with Type II diabetes. Once released into the circulation, it has central and peripheral effects by binding LEPR, found in many tissues, which results in the activation of several major signaling pathways. It acts as an appetite-regulating factor, regulates bone mass and secretion of hypothalamo-pituitary-adrenal hormones, it increases basal metabolism, influences reproductive function, regulates pancreatic beta-cell function and insulin secretion, it induces FOS and SOCS3 expression to release anorexigenic peptides. It has a modulatory role in nutrient absorption. It reduces glucose absorption by enterocytes by activating PKC and leading to a sequential activation of p38, PI3K and ERK signaling pathways which exerts an inhibitory effect on glucose absorption. It acts as a growth factor on certain tissues, through the activation of different signaling pathways increases expression of genes involved in cell cycle regulation such as CCND1, via JAK2-STAT3 pathway, or VEGFA, via MAPK1/3 and PI3K-AKT1 pathways. It may also play an apoptotic role via JAK2-STAT3 pathway and up-regulation of BIRC5 expression. It plays a pro-inflammatory role, in synergy with IL1B, by inducing NOS2 which promotes the production of IL6, IL8 and Prostaglandin E2, through a signaling pathway that involves JAK2, PI3K, MAP2K1/MEK1 and MAPK14/p38. In adaptive immunity, promotes the switch of memory T-cells towards T helper-1 cell immune responses. Increases CD4+CD25- T cells proliferation and reduces autophagy during TCR (T cell receptor) stimulation, through MTOR signaling pathway activation and BCL2 up-regulation.

**Synonyms:**

rabbit anti-Leptin, LEP antibody, Leptin Murine Obesity Homolog antibody, Leptin Precursor Obesity Factor antibody, OB antibody, Obese Protein antibody

**Note:**

This antiserum against Mouse Leptin has been tested for use in ELISA and immunoblotting. Reactivity in other immunoassays is unknown. This product has been assayed by immunoblot against tissue homogenates using HRP Goat-anti-Rabbit IgG [H&L] (code # 611-1302) and TMB as a substrate. A working dilution range of 1:200 to 1:400 is suggested for this application. This product has been assayed by ELISA against recombinant mouse leptin using HRP Conjugated Anti-Rabbit IgG [H&L] (Goat) (code # 611-1302) and ABTS as a substrate for 30 minutes at room temperature. A working dilution of 1:2,400 is suggested for this product.