

Datasheet for 110-401-320-0100**Leptin Antibody****Overview**

Description:	Anti-Leptin (RABBIT) Antibody - 110-401-320-0100
Item No.:	110-401-320-0100
Size:	100 µL
Applications:	ELISA, WB
Reactivity:	Human, Mouse
Host Species:	Rabbit

Product Details**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
Host Species:	Rabbit
Clonality:	Polyclonal

Format: Antiserum

Target Details

Gene Name:	Lep
Reactivity:	Human, Mouse
Immunogen Type:	Recombinant Protein
Immunogen:	This whole rabbit serum was prepared by repeated immunizations with recombinant mouse leptin 16,000 MW produced in E. coli.
Purity/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.
Relevant Links:	• NCBI - P41160.1 • UniProtKB - P41160 • GeneID - 16846

Application Details

Tested Applications:	ELISA, WB
Application 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.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	1:1,000 - 1:5,000
WB:	1:500 - 1:2,000

Formulation

Physical State:	Liquid (sterile filtered)
Concentration:	85 mg/mL by Refractometry

Buffer:	None
Preservative:	0.01% (w/v) Sodium Azide
Stabilizer:	None

Shipping & Handling

Shipping Condition:	Dry Ice
Storage Condition:	Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.
Expiration:	Expiration date is one (1) year from date of receipt.

Disclaimer

This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact a technical service representative for more information. All products of animal origin manufactured by Rockland Immunochemicals are derived from starting materials of North American origin. Collection was performed in United States Department of Agriculture (USDA) inspected facilities and all materials have been inspected and certified to be free of disease and suitable for exportation. All properties listed are typical characteristics and are not specifications. All suggestions and data are offered in good faith but without guarantee as conditions and methods of use of our products are beyond our control. All claims must be made within 30 days following the date of delivery. The prospective user must determine the suitability of our materials before adopting them on a commercial scale. Suggested uses of our products are not recommendations to use our products in violation of any patent or as a license under any patent of Rockland Immunochemicals, Inc. If you require a commercial license to use this material and do not have one, then return this material, unopened to: Rockland Inc., P.O. BOX 5199, Limerick, Pennsylvania, USA.