

Mouse LEP Antibody Pair Set

Catalog No.	E-KAB-0087	Applications	ELISA
Synonyms	LEPD, OB, OBS, Obesity Homolog		

Kit components & Storage

Title	Specifications	Storage
Mouse LEP Capture Antibody	1 vial, 100 µg	Store at -20°C for one year. Avoid freeze / thaw cycles.
Mouse LEP Detection Antibody (Biotin)	1 vial, 50 µL	Store at -20°C for one year. Avoid freeze / thaw cycles.

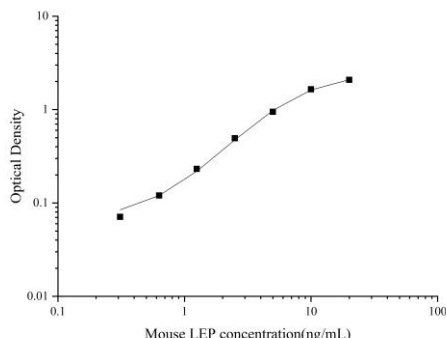
Note: Centrifuge before opening to ensure complete recovery of vial contents.

Product Information

Items		Characteristic (E-KAB-0087)	
		Mouse LEP Capture Antibody	Mouse LEP Detection Antibody (Biotin)
Immunogen Information	Immunogen	Recombinant Mouse LEP protein	Recombinant Mouse LEP protein
	Swissprot	P41160	
Product details	Reactivity	Mouse	Mouse
	Host	Goat	Goat
	Conjugation	Unconjugated	Biotin
	Concentration	0.5mg/mL	/
	Buffer	PBS with 0.04% Proclin 300, 50% glycerol, pH 7.4	PBS with 0.04% Proclin 300, 1% protective protein, 50% glycerol, pH 7.4
	Purify	Antigen Affinity	Antigen Affinity
	Specificity	Detects Mouse LEP in ELISAs.	

Applications

Mouse LEP Sandwich ELISA Assay:

	Recommended Concentration/Dilution	Reagent	Images																
ELISA Capture	0.5-4µg/mL	Mouse LEP Capture Antibody	 <p>The graph displays a standard curve for the Mouse LEP Sandwich ELISA Assay. The x-axis represents Mouse LEP concentration in ng/mL on a logarithmic scale from 0.1 to 100. The y-axis represents Optical Density on a logarithmic scale from 0.01 to 10. The data points show a clear upward trend, indicating that as the concentration of Mouse LEP increases, the optical density also increases.</p> <table border="1"> <caption>Approximate data points from the standard curve</caption> <thead> <tr> <th>Mouse LEP concentration (ng/mL)</th> <th>Optical Density</th> </tr> </thead> <tbody> <tr> <td>0.2</td> <td>0.05</td> </tr> <tr> <td>0.5</td> <td>0.1</td> </tr> <tr> <td>1</td> <td>0.2</td> </tr> <tr> <td>2</td> <td>0.4</td> </tr> <tr> <td>5</td> <td>0.8</td> </tr> <tr> <td>10</td> <td>1.5</td> </tr> <tr> <td>20</td> <td>2.5</td> </tr> </tbody> </table>	Mouse LEP concentration (ng/mL)	Optical Density	0.2	0.05	0.5	0.1	1	0.2	2	0.4	5	0.8	10	1.5	20	2.5
Mouse LEP concentration (ng/mL)	Optical Density																		
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ELISA Detection	1:1000-1:10000	Mouse LEP Detection Antibody (Biotin)																	

Note: This standard curve is only for demonstration purposes. A standard curve should be generated for each assay!

Background

Key player in the regulation of energy balance and body weight control. Once released into the circulation, has central and peripheral effects by binding LEPR, found in many tissues, which results in the activation of several major signaling pathways. In the hypothalamus, acts as an appetite-regulating factor that induces a decrease in food intake and an increase in energy consumption by inducing anorexigenic factors and suppressing orexigenic neuropeptides, also regulates bone mass and secretion of hypothalamo-pituitary-adrenal hormones. In the periphery, increases basal metabolism, influences reproductive function, regulates pancreatic beta-cell function and insulin secretion, is pro-angiogenic for endothelial cell and affects innate and adaptive immunity. In the arcuate nucleus of the hypothalamus, activates by depolarization POMC neurons inducing FOS and SOCS3 expression to release anorexigenic peptides and inhibits by hyperpolarization NPY neurons inducing SOCS3 with a consequent reduction on release of orexigenic peptides. In addition to its known satiety inducing effect, has a modulatory role in nutrient absorption. In the intestine, 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. 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. May also play an apoptotic role via JAK2-STAT3 pathway and up-regulation of BIRC5 expression. Pro-angiogenic, has mitogenic activity on vascular endothelial cells and plays a role in matrix remodeling by regulating the expression of matrix metalloproteinases (MMPs) and tissue inhibitors of metalloproteinases (TIMPs). In innate immunity, modulates the activity and function of neutrophils by increasing chemotaxis and the secretion of oxygen radicals. Increases phagocytosis by macrophages and enhances secretion of pro-inflammatory mediators. Increases cytotoxic ability of NK cells.

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