Leptin R/LEPR Protein, Human (HEK293, His)

Cat. No.:	HY-P72524
Synonyms:	Leptin receptor; LEP-R; HuB219; OB receptor; OB-R; CD295; LEPR; DB; OBR
Species:	Human
Source:	HEK293
Accession:	P48357 (F22-D839)
Gene ID:	3953
Molecular Weight:	100-130 kDa

PROPERTIES

AA Sequence	F N L S Y P I T P W R F K L S C M P P N S T Y D Y F L L P A G L S K N T S N S N G H Y E T A V E P K F N S S G T H F S N L S K T T F H C C F R S E Q D R N C S L C A D N I E G K T F V S T V N S L V F Q Q I D A N W N I Q C W L K G D L K L F I C Y V E S L F K N L F R N Y N Y K V H L L Y V L P E V L E D S P L V P Q K G S F Q M V H C N C S V H E C C E C L V P V P T A K L N D T L L M C L K I T S G G V I F Q S P L M S V Q P I N M V K P D P P L G L H M E I T D D G N L K I S W S S P P L V P F P L Q Y Q V K Y S E N S T T V I R E A D K I V S A T S L L V D S I L P G S S Y E V Q V R G K R L D G P G I W S D W S T P R V F T T Q D V I Y F P P K I L T S V G S N V S F H C I Y K K E N K I V P S K E I V W W M N L A E K I P Q S Q Y D V V S D H V S K V T F F N L N E T K P R G K F T Y D A V Y C C N E H E C H H R Y A E L Y V I D V N I N I S C E T D G Y L T K M T C R W S T S T I Q S L A E S T L Q L R Y H R S S L Y C S D I P S I H P I S E P K D C Y L Q S D G F Y E C I F Q P I F L L S G Y T M W I R I N H S L G S L D S P P T C V L P D S V V K P L P P S S V K A E I T I N I G L L K I S W E K P V F P E N N L Q F Q I R Y G L S G K E V Q W K M Y E V Y D A K S K S V S L P V P D L C A V Y A V Q V R C K R L D G L G Y W S N W S N P A Y T V V M D I K V P M R G P E F W R I I N G D T M K K E K N V T L L W K P L M K N D S L C S V Q R Y V I N H H T S C N G T W S E D V G N H T K F T F L W T E Q A H T V T V L A I N S I G A S V A N F N L T F S W P M S K V N I V Q S L S A Y P L N S S C V I V S W I L S P S D Y K L M Y F I I E W K N L N E D G E I K W L R I S S S V K K Y Y I H D H F I P I E K Y Q F S L Y P I F M E G V G K P K I I N S F T Q D D I E K H Q S D
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 μm filtered solution of PBS, pH 7.4.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).

Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	Leptin R/LEPR Protein functions as a receptor for the hormone LEP/leptin, playing a pivotal role in mediating its central and peripheral effects through the activation of diverse signaling pathways, including JAK2/STAT3 and the MAPK cascade/FOS. In the hypothalamus, LEP acts as an appetite-regulating factor, inducing a decrease in food intake and an increase in energy consumption by influencing anorexinogenic factors and suppressing orexigenic neuropeptides. Furthermore, it regulates bone mass and secretion of hypothalamo-pituitary-adrenal hormones. In the periphery, Leptin R/LEPR impacts basal metabolism, reproductive function, pancreatic beta-cell function, insulin secretion, angiogenesis, and innate and adaptive immunity. The control of energy homeostasis and melanocortin production, as well as the regulation of fertility, growth, and glucose homeostasis, involves distinct signaling pathways. Additionally, Leptin R/LEPR participates in the counter-regulatory response to hypoglycemia by inhibiting neurons of the parabrachial nucleus and has specific effects on T lymphocyte responses, modulating the proliferation of naive and memory T cells and influencing cytokine production. Moreover, it may serve as a transporter for LEP across the blood-brain barrier and is involved in LEP endocytosis, albeit without inducing phosphorylation of and activating STAT3.

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