

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

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| Cat. No.: | HY-P72523 |
| Synonyms: | Leptin receptor; LEP-R; HuB219; OB receptor; OB-R; CD295; LEPR; DB; OBR |
| Species: | Mouse |
| Source: | HEK293 |
| Accession: | P48356 (L22-G839) |
| Gene ID: | 16847 |
| Molecular Weight: | 120-150 kDa |

PROPERTIES

AA Sequence

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| L N L A Y P I S P W | K F K L F C G P P N | T T D D S F L S P A | G A P N N A S A L K |
| G A S E A I V E A K | F N S S G I Y V P E | L S K T V F H C C F | G N E Q G Q N C S A |
| L T D N T E G K T L | A S V V K A S V F R | Q L G V N W D I E C | W M K G D L T L F I |
| C H M E P L P K N P | F K N Y D S K V H L | L Y D L P E V I D D | S P L P P L K D S F |
| Q T V Q C N C S L R | G C E C H V P V P R | A K L N Y A L L M Y | L E I T S A G V S F |
| Q S P L M S L Q P M | L V V K P D P P L G | L H M E V T D D G N | L K I S W D S Q T M |
| A P F P L Q Y Q V K | Y L E N S T I V R E | A A E I V S A T S L | L V D S V L P G S S |
| Y E V Q V R S K R L | D G S G V W S D W S | S P Q V F T T Q D V | V Y F P P K I L T S |
| V G S N A S F H C I | Y K N E N Q I I S S | K Q I V W W R N L A | E K I P E I Q Y S I |
| V S D R V S K V T F | S N L K A T R P R G | K F T Y D A V Y C C | N E Q A 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 P S T | I Q S L V G S T V Q |
| L R Y H R R S L Y C | P D S P S I H P T S | E P K N C V L Q R D | G F Y E C V 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 N V |
| K A E I T V N T G L | L K V S W E K P V F | P E N N L Q F Q I R | Y G L S G K E I Q W |
| K T H E V F D A K S | K S A S L L V S D L | C A V Y V V Q V R C | R R L D G L G Y W S |
| N W S S P A Y T L V | M D V K V P M R G P | E F W R K M D G D V | T K K E R N V T L L |
| W K P L T K N D S L | C S V R R Y V V K H | R T A H N G T W S E | D V G N R T N L T F |
| L W T E P A H T V T | V L A V N S L G A S | L V N F N L T F S W | P M S K V S A V E S |
| L S A Y P L S S S C | V I L S W T L S P D | D Y S L L Y L V I E | W K I L N E D D G M |
| K W L R I P S N V K | K F Y I H D N F I P | I E K Y Q F S L Y P | V F M E G V G K P K |
| I I N G F T K D A I | D K Q Q N D A G | | |

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.

Reconstitution

It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH₂O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).

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| 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, the receptor for the hormone LEP/leptin, plays a pivotal role in mediating both central and peripheral effects of leptin through the activation of distinct signaling pathways, including JAK2/STAT3 and the MAPK cascade/FOS. In the hypothalamus, leptin functions as an appetite-regulating factor, inducing decreased food intake and increased energy consumption, thereby regulating bone mass and hypothalamo-pituitary-adrenal hormones. In the periphery, Leptin R/LEPR influences basal metabolism, reproductive function, pancreatic beta-cell function, insulin secretion, angiogenesis, and immune responses. It controls energy homeostasis and melanocortin production through STAT3 signaling, modulating various physiological processes such as fertility, growth, and glucose homeostasis. Additionally, Leptin R/LEPR is involved in the counter-regulatory response to hypoglycemia and has a specific impact on T lymphocyte responses, influencing cytokine production and T-cell proliferation. It may also play a role in transporting leptin across the blood-brain barrier and mediating its endocytosis without inducing STAT3 phosphorylation.

Caution: Product has not been fully validated for medical applications. For research use only.

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