

## Product datasheet for **RC209259**

### Leptin (LEP) (NM\_000230) Human Tagged ORF Clone

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** Leptin (LEP) (NM\_000230) Human Tagged ORF Clone  
**Tag:** Myc-DDK  
**Symbol:** Leptin  
**Synonyms:** LEPD; OB; OBS  
**Mammalian Cell Selection:** Neomycin  
**Vector:** pCMV6-Entry (PS100001)  
**E. coli Selection:** Kanamycin (25 ug/mL)  
**ORF Nucleotide Sequence:** >RC209259 ORF sequence  
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGCATTGGGAACCCTGTGCGGATTCTTGTTGGCTTTGGCCCTATCTTTTCTATGTCCAAGCTGTGCCCA  
TCCAAAAAGTCCAAGATGACACCAAAACCTCATCAAGACAATTGTCACCAGGATCAATGACATTTACACA  
CACGCAGTCAGTCTCCTCCAACAGAAAGTCACCGTTTGGACTTCATTCTGGGCTCCACCCCATCCTG  
ACCTTATCCAAGATGGACCAGACTGGCAGTCTACCAACAGATCCTCACCAGTATGCCTCCAGAAACG  
TGATCCAATATCCAACGACCTGGAGAACCTCCGGGATCTTCTTACGTGCTGGCCTTCTAAGAGCTG  
CCACTTGCCCTGGGCCAGTGGCCTGGAGACCTTGACAGCCTGGGGGTGTCTGGAAGCTTCAGGCTAC  
TCCACAGAGGTGGTGGCCCTGAGCAGGCTGCAGGGTCTCTGCAGGACATGCTGTGGCAGCTGGACCTCA  
GCCCTGGGTGC

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:** >RC209259 protein sequence  
Red=Cloning site Green=Tags(s)  
MHWGTLCGFLWLWPYLFYVQAVPIQKVQDDTKLTIKTIVTRINDISHTQSVSSKQKVTGLDFIPGLHPIL  
TLSKMDQTLAVYQQILTSMPSRNVIQISNDLENLRDLLHVLAFSKSCHLPWASGLETLDLGGVLEASGY  
STEVVALSRLQGSQDMLWQLDLSPGC

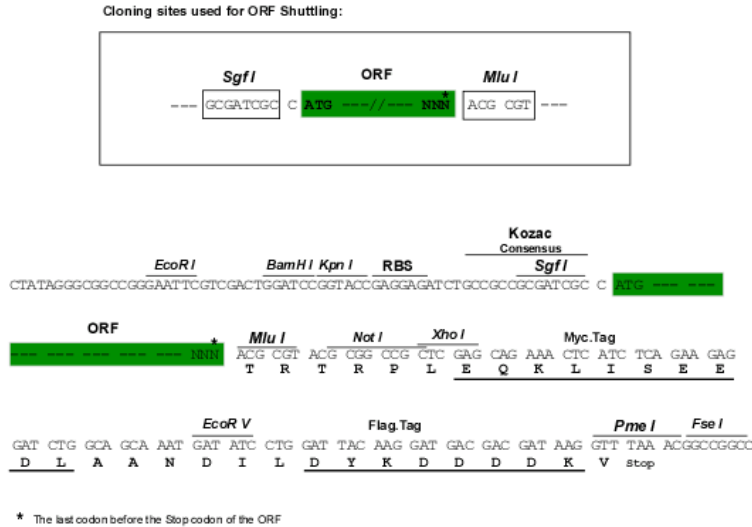
**TRTRPLEQKLI**SEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mk6126\\_h08.zip](https://cdn.origene.com/chromatograms/mk6126_h08.zip)



**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_000230

**ORF Size:** 501 bp

**OTI Disclaimer:** The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

**OTI Annotation:** This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

**Components:** The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

**Reconstitution Method:**

1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.

**Note:** Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

**RefSeq:** [NM\\_000230.3](#)

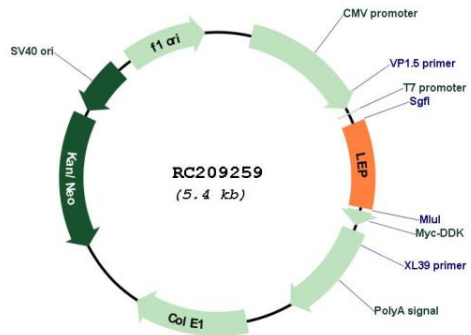
**RefSeq Size:** 3444 bp

**RefSeq ORF:** 504 bp

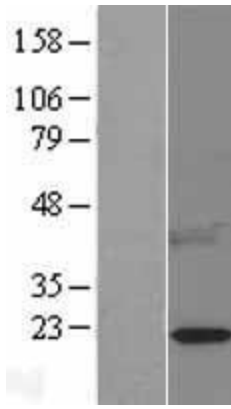
**Locus ID:** 3952  
**UniProt ID:** [P41159](#)  
**Cytogenetics:** 7q32.1  
**Domains:** Leptin  
**Protein Families:** Druggable Genome, Secreted Protein  
**Protein Pathways:** Adipocytokine signaling pathway, Cytokine-cytokine receptor interaction, Jak-STAT signaling pathway, Neuroactive ligand-receptor interaction  
**MW:** 18.6 kDa

**Gene Summary:** This gene encodes a protein that is secreted by white adipocytes into the circulation and plays a major role in the regulation of energy homeostasis. Circulating leptin binds to the leptin receptor in the brain, which activates downstream signaling pathways that inhibit feeding and promote energy expenditure. This protein also has several endocrine functions, and is involved in the regulation of immune and inflammatory responses, hematopoiesis, angiogenesis, reproduction, bone formation and wound healing. Mutations in this gene and its regulatory regions cause severe obesity and morbid obesity with hypogonadism in human patients. A mutation in this gene has also been linked to type 2 diabetes mellitus development. [provided by RefSeq, Aug 2017]

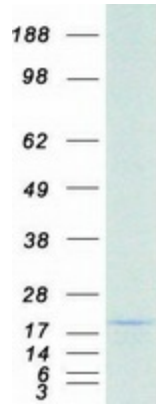
### Product images:



Circular map for RC209259



Western blot validation of overexpression lysate (Cat# [LY400087]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC209259 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified LEP protein (Cat# [TP309259]). The protein was produced from HEK293T cells transfected with LEP cDNA clone (Cat# RC209259) using MegaTran 2.0 (Cat# [TT210002]).