

Product datasheet for **MG226858**

Lepr (NM_001122899) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Lepr (NM_001122899) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Lepr
Synonyms:	db; diabetes; Leprb; LEPROT; Modb1; OB-RGRP; obese-like; obl; Obr
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide
Sequence:

>MG226858 representing NM_001122899
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGATGTGTCAGAAATTCTATGTGGTTTTGTACTGGAATTTCTTTATGTGATAGTGCACCTTAACC
 TGGCATATCCAATCTCTCCCTGGAAATTTAAGTTGTTTTGTGGACCACCGAACACAACCGATGACTCCTT
 TCTCTCACCTGCTGGAGCCCCAAACAATGCCTCGGCTTTGAAGGGGGCTTCTGAAGCAATTGTTGAAGCT
 AAATTTAATCAAGTGGTATCTACGTTCTGAGTTATCCAAAACAGTCTTCCACTGTTGCTTTGGGAATG
 AGCAAGGTCAAACCTGCTCTGCACTCACAGACAACACTGAAGGGAAGACACTGGCTTCAGTAGTGAAGGC
 TTCAGTTTTTCGCCAGCTAGGTGTAACACTGGGACATAGAGTGTGGATGAAAGGGGACTTGACATTATTC
 ATCTGTCATATGGAGCCATTACCTAAGAACCCTTCAAGAATTATGACTCTAAGGTCCATCTTTTATATG
 ATCTGCCTGAAGTCATAGATGATTCGCCTCTGCCCCACTGAAAGACAGCTTTCAGACTGTCCAATGCAA
 CTGCAGTCTTCGGGGATGTGAATGTCATGTGCCGGTACCCAGAGCCAACTCACTACGCTCTTCTGATG
 TATTTGGAAATCACATCTGCCGGTGTGAGTTTTAGTCACCTCTGATGTCAGTGCAGCCATGCTTGTG
 TGAACCCGATCCACCCTTAGGTTTGCATATGGAAGTCACAGATGATGGTAAATTTAAAGATTTCTTGGGA
 CAGCCAAACAATGGCACCATTTCCGCTTCAATATCAGGTGAAATTTAGAGAATTTACAAATGTAAGA
 GAGGCTGCTGAAATGTCTCAGCTACATCTCTGCTGGTAGACAGTGTGCTTCTGGATCTTCATATGAGG
 TCCAGGTGAGGAGCAAGAGACTGGATGGTTCAGGAGTCTGGAGTACTGGAGTTCACCTCAAGTCTTTAC
 CACACAAGATGTTGTGTATTTCCACCCAAAATTTCTGACTAGTGTGGATCGAATGCTTCTTTTCATTGC
 ATCTACAAAAACGAAAACCAGATTATCTCTCAAACAGATAGTTTGGTGGAGGAATCTAGCTGAGAAAA
 TCCCTGAGATACAGTACAGCATTGTGAGTGACCGAGTTAGCAAAGTTACCTTCTCAACCTGAAAGCCAC
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 GCTGAATTATACGTGATCGATGTCAATATCAATATATCATGTGAAACTGACGGTACTTAACTAAAATGA
 CTTGCAGATGGTCACCCAGCACAAATCCAATCACTAGTGGGAAGCACTGTGCAGCTGAGGTATCACAGGCG
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 GACGGCTTTTATGAATGTGTTTTCCAGCCAATCTTTCTATTATCTGGCTATACAATGTGGATCAGGATCA
 ACCATTCTTTAGGTTCACTTACTGCGCCACCAACGTGTCTTCTGACTCCGTAGTAAAACCACTACC
 TCCATCTAACGTAAAAGCAGAGATTACTGTAACACTGGATTATTGAAAGTATCTTGGGAAAAGCCAGTC
 TTTCCGGAGAATAACCTTCAATCCAGATTCGATATGGCTTAAGTGGAAAAGAAATACAATGGAAGACAC
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 CCAGGTTCTGCTGCCGGCGGTTGGATGGACTAGGATATTGGAGTAATTGGAGCAGTCCAGCCTATACGCTT
 GTCATGGATGTAAGGTTCTATGAGAGGGCTGAATTTTGGAGAAAAATGGATGGGGACGTTACTAAAA
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 ATTTAAACCTTACCTTCTCATGGCCATGAGTAAAGTGAAGTGTGGAGTCACTCAGTGCTTATCCCT
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 TATGTCATTGTACCCATAATTTTCTCTTGTGCTACTGCTCGGAACACTGTTAATTTACACCAGA
 GAATGAAAAAGTTGTTTTGGGACGATGTTCCAAACCCCAAGAATTGTTCTGGGCACAAGGACTGAATTT
 CCAAAGAGAACGGACTCTT

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence: >MG226858 representing NM_001122899
 Red=Cloning site Green=Tags(s)

MMCQKFYVLLHWEFLYVIAALNLAYPISPWKFKLCGPPNTTDDSFLSPAGAPNNASALKGASEAIVEA
 KFNSSGIYVPELSTVVFHCCFGNEQQNCALSALTDNTEGKTLASVVKASVFRQLGVNWDIECWMKGDLTFL
 ICHMEPLPKNPFKNYDSKVHLLYDLPEVIDDSPLPPLKDSFQTVQCNCSLRGCECHVPVPRAKLNYALLM
 YLEITSAGVSFQSPMLSLQPMPLVVKPDPPLGLHMEVTDGDLKISWDSQTMAPPFLQYQVLYLENSTIVR
 EAAEIVSATSLLVDSVLPSSSYEVQVRSKRLDGSVWSDWSSPQVFTTQDVVYFPFKILT SVGSNASFHC
 IYKNENQIISSKQIVWWRNLAEKIPEIQYSIVSDRVSKVTF SNLKATRPRGKFTYDAVYCCNEQACHRY
 AELYVIDVNIINISCETDGYLTKMTCRWSPTIQSLVGSTVQLRYHRRSLYCPDPSIHTPSEPKNCVLQR
 DGFYECVFQPIFLLSGYTMWIRINHSLGSLDSPPTCVLPDSVVKPLPPSNVKAIEITVNTGLLKVSWEKPV
 FPENNLQFQIRYGLSGKEIQWKTHEVFDKSKSASLLVSDLCVAVVVQVRCRRLDGLGYWSNWSSPAYTL
 VMDVKVPMRGPEFWRKMDGDVTKKERNVTLWKPLTKNDSLCSVRRYVVKHRTAHNGTSEDVGNRTNLT
 FLWTEPAHTVTVLAVNSLGASLVNFNLF SWPMSKVS AVESLSAYPLSSSCVILSWTLPDDYSLLYLVI
 EWKILNEDDGMKWLRIIPSNVKKFYIHDNFIPIEKYQFSLYPVFMGVGPKIINGFTKDAIDKQNDAGL
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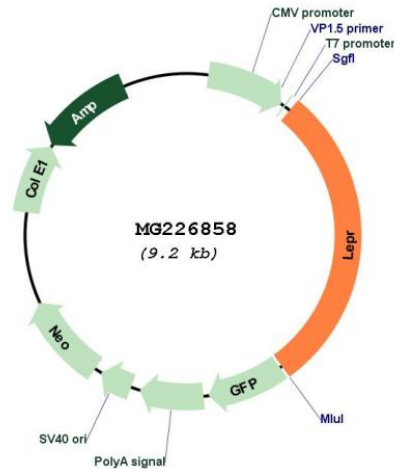
TRTRPLE - GFP Tag - V

Restriction Sites:

SgfI-MluI

Cloning Scheme:



Plasmid Map:


ACCN: NM_001122899

ORF Size: 2682 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.

RefSeq: [NM_001122899.2](#)

RefSeq Size: 5571 bp

RefSeq ORF: 2685 bp

Locus ID: 16847

UniProt ID: [P48356](#)

Cytogenetics: 4 46.96 cM

Gene Summary:

Receptor for hormone LEP/leptin (Probable) (PubMed:11861497). On ligand binding, mediates LEP central and peripheral effects through the activation of different signaling pathways such as JAK2/STAT3 and MAPK cascade/FOS (PubMed:10799542, PubMed:25383904, PubMed:11923481, PubMed:11861497). In the hypothalamus, LEP 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 (PubMed:10660043, PubMed:12594516). In the periphery, increases basal metabolism, influences reproductive function, regulates pancreatic beta-cell function and insulin secretion, is pro-angiogenic and affects innate and adaptive immunity (PubMed:25383904, PubMed:11923481). Control of energy homeostasis and melanocortin production (stimulation of POMC and full repression of AgRP transcription) is mediated by STAT3 signaling, whereas distinct signals regulate NPY and the control of fertility, growth and glucose homeostasis (PubMed:12594516). Involved in the regulation of counter-regulatory response to hypoglycemia by inhibiting neurons of the parabrachial nucleus (PubMed:25383904). Has a specific effect on T lymphocyte responses, differentially regulating the proliferation of naive and memory T-cells. Leptin increases Th1 and suppresses Th2 cytokine production (PubMed:9732873).[UniProtKB/Swiss-Prot Function]