

Product datasheet for **MR226861**

Lepr (NM_010704) Mouse Tagged ORF Clone

Product data:

| | |
|---------------------------|---|
| Product Type: | Expression Plasmids |
| Product Name: | Lepr (NM_010704) Mouse Tagged ORF Clone |
| Tag: | Myc-DDK |
| Symbol: | Lepr |
| Synonyms: | db; diabetes; Leprb; LEPROT; Modb1; OB-RGRP; obese-like; obl; Obr |
| Mammalian Cell Selection: | Neomycin |
| Vector: | pCMV6-Entry (PS100001) |
| E. coli Selection: | Kanamycin (25 ug/mL) |



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ORF Nucleotide
Sequence:

>MR226861 representing NM_010704
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGATGTGTCAGAAATTCTATGTGGTTTTGTACTGGAATTTCTTTATGTGATAGTGCACCTTAACC
 TGGCATATCCAATCTCTCCCTGGAAATTTAAGTTGTTTTGTGGACCACCGAACACAACCGATGACTCCTT
 TCTCTCACCTGTGGAGCCCCAAACAATGCCTCGGCTTTGAAGGGGGCTTCTGAAGCAATTGTTGAAGCT
 AAATTTAATCAAGTGGTATCTACGTTCTGAGTTATCCAAAACAGTCTTCCACTGTTGCTTTGGGAATG
 AGCAAGGTCAAACCTGCTCTGCACTCACAGACAACACTGAAGGGAAGACTGGCTTCAGTAGTGAAGGC
 TTCAGTTTTTCGCCAGCTAGGTGTAACACTGGGACATAGAGTGTGGATGAAAGGGGACTTGACATTATTC
 ATCTGTCATATGGAGCCATTACCTAAGAACCCTTCAAGAATTATGACTCTAAGGTCCATCTTTTATATG
 ATCTGCCTGAAGTCATAGATGATTCGCCTCTGCCCCACTGAAAGACAGCTTTCAGACTGTCCAATGCAA
 CTGCAGTCTTCGGGGATGTGAATGTCATGTGCCGGTACCCAGAGCCAACTCAACTACGCTCTTCTGATG
 TATTTGAAATACATCTGCCGGTGTGAGTTTTAGTCACCTCTGATGTCAGCTGCAGCCATGCTTGTG
 TGAACCCGATCCACCCTTAGGTTTGCATATGGAAGTCACAGATGATGGTAAATTTAAAGATTTCTTGGGA
 CAGCCAAACAATGGCACCATTTCCGCTTCAATATCAGGTGAAATATTTAGAGAATTTACAATTTGAAGA
 GAGGCTGCTGAAATGTCTCAGCTACATCTCTGCTGGTAGACAGTGTGCTTCTGGATCTTCATATGAGG
 TCCAGGTGAGGAGCAAGAGACTGGATGGTTCAGGAGTCTGGAGTACTGGAGTTCACCTCAAGTCTTTAC
 CACACAAGATGTTGTGATTTTCCACCCAAAATCTGACTAGTGTGGATCGAATGCTTCTTTTTCATTGC
 ATCTACAAAAACGAAAACCAGATTATCTCTCAAACAGATAGTTGGTGGAGGAATCTAGCTGAGAAAA
 TCCCTGAGATACAGTACAGCATTGTGAGTGACCGAGTTAGCAAAGTTACCTTCTCAAACGAAAAGCCAC
 CAGACCTCGAGGGAAGTTTACCTATGACGCAAGTACTGCTGCAATGAGCAGGCGTGCCATCACCGCTAT
 GCTGAATTATACGTGATCGATGTCAATATCAATATATCATGTGAAACTGACGGGACTTAACTAAAATGA
 CTTGCAGATGGTCACCCAGCACAATCCAATCACTAGTGGGAAGCACTGTGCAGCTGAGGTATCACAGGCG
 CAGCCTGTATTGCTGATAGTCCATCTATTACCTACGCTGAGCCAAAAACTGCGTCTTACAGAGA
 GACGGCTTTTATGAATGTGTTTTCCAGCCAATCTTTCTATTATCTGGCTATACAATGTGGATCAGGATCA
 ACCATTCTTTAGGTTCACTTGACTCGCCACCAACGTGTCTTCTGACTCCGTAGTAAAACCACTACC
 TCCATCTAACGTAAAAGCAGAGATTACTGTAACACTGGATTATTGAAAGTATCTTGGGAAAAGCCAGTC
 TTTCCGGAGAATAACCTTCAATCCAGATTCGATATGGCTTAAGTGGAAAAGAAATACAATGGAAGACAC
 ATGAGGTATTCGATGCAAAGTCAAAGTCTGCCAGCCTGCTGGTGTGAGACCTCTGTGCACTATGTGGT
 CCAGGTTCTGCTGCCGGCGGTTGGATGGACTAGGATATTGGAGTAATTGGAGCAGTCCAGCCTATACGCTT
 GTCATGGATGTAAGGTTCTATGAGAGGGCTGAATTTTGGAGAAAAATGGATGGGGACGTTACTAAAA
 AGGAGAGAAAATGTCACCTTGCTTTGGAAGCCCCTGACGAAAAATGACTCACTGTGTAGTGTGAGGAGGTA
 CGTGGTGAAGCATCGTACTGCCACAATGGGACGTGGTCAGAAGATGTGGGAAATCGGACCAATCTCACT
 TTCCTGTGGACAGAACCAGCGCACACTGTTACAGTTCTGGCTGTCAATCCCTCGGCGTTCCTTGTGA
 ATTTTAACTTACCTTCTCATGGCCATGAGTAAAGTGTGCTGTGGAGTCACTCAGTGCTTATCCCT
 GAGCAGCAGCTGTGTATCCTTTCTGGACACTGTACCTGATGATTATAGTCTGTTATATCTGGTTATT
 GAATGGAAGATCCTTAATGAAGATGATGGAATGAAGTGGCTTAGAATCCCTCGAATGTTAAAAAGTTTT
 ATATCCACGATAATTTTATCCCATCGAATAATCAGTTTAGTCTTTACCCAGTATTTATGGAAGGAGT
 TGGAAAACCAAAGATAATTAATGGTTTACCAAAGATGCTATCGACAAGCAGCAGAATGACGCAGGGCTG
 TATGTCATTGTACCCATAATTTTCTCTGTGCTACTGCTCGGAACACTGTTAATTTACACCAGA
 GAATGAAAAAGTTGTTTTGGGACGATGTTCCAAACCCCAAGAATTGTTCTGGGCACAAGGACTGAATTT
 CCAAAGGTCAGTGT

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >MR226861 representing NM_010704
 Red=Cloning site Green=Tags(s)

MMCQKFYVLLHWEFLYVIAALNLAYPISPWKFKLCGPPNTTDDSFSPAGAPNNASALKGASEAIVEA
 KFNSSGIYVPELSTVVFHCCFGNEQQNCSTLDNTEGKTLASVVKASVFRQLGVNWDIECWMKGDTLF
 ICHMEPLPKNPFKNYDSKVHLLYDLPEVIDDSPLPLKDSFQTVQCNCSLRGCECHVPVPRAKLNYALLM
 YLEITSAGVSVFQSPMLSLQPMLVVKPDPPLGLHMEVTDGDLKISWDSQTMAPPFLQYQVKYLENSTIVR
 EAAEIVSATSLLVDSVLPGSSYEVQVRSKRLDGSVWSDWSSPQVFTTQDVVYFPPKILTSVGSNASFHC
 IYKNENQIISSEKQIVVWRNLAEKIPEIQYSIVSDRVSKVTFNLKATRPRGKFTYDAVYCCNEQACHHRY
 AELYVIDVNIINISCETDGYLTKMTCRWSPSTIQSLVGSTVQLRYHRRSLYCPDPSIHTPSEPKNQVLRQ
 DGFYECVFPQIFLLSGYTMWIRINHSLGSLDSPPTCVLPDSVVKPLPPSNVKAETVNTGLLKVSWEKPV
 FPENNLQFQIRYGLSGKEIQWKTHEVFDKSKSASLLVSDLCVAVVVQVRCRRLDGLGYWSNWSSPAYTL
 VMDVKVPMRGPWFWRKMDGDVTKKERNVTLWKPLTKNDSLCSVRRYVVKHRTAHNGTSEDVGNRNTLT
 FLWTEPAHTVTVLAVNSLGASLVNFNLFVSWPMSKVSAYESLSAYPLSSSCVILSWTLSPDDYSLLYLVI
 EWKILNEDDGMKWLRIIPSNVKKFYIHDNFIPIEKYQFSLYPVFMGVGPKIINGFTKDAIDKQONDAGL
 YVIVPIIISSCVLLLGLLLISHQRMKFLWDDVNPKNCSWAQGLNFQKVTV

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mm9031_a10.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



* The last codon before the Stop codon of the ORF

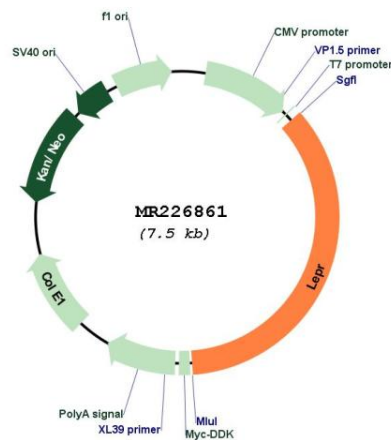
ACCN: NM_010704

| | |
|-------------------------------|--|
| ORF Size: | 2676 bp |
| OTI Disclaimer: | <p>Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.</p> <p>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</p> |
| 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: | <ol style="list-style-type: none"> 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_010704.2 , NP_034834.1 |
| RefSeq Size: | 3407 bp |
| RefSeq ORF: | 2679 bp |
| Locus ID: | 16847 |
| UniProt ID: | P48356 |
| Cytogenetics: | 4 46.96 cM |
| MW: | 101.2 kDa |

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]

Product images:



Circular map for MR226861