

## Product datasheet for **RR204359**

### Metrnl (NM\_001014104) Rat Tagged ORF Clone

#### Product data:

|                           |  |
|---------------------------|--|
| Product Type:             | Expression Plasmids  |
| Product Name:             | Metrnl (NM_001014104) Rat Tagged ORF Clone                                     |
| Tag:                      | Myc-DDK  |
| Symbol:                   | Metrnl   |
| Mammalian Cell Selection: | Neomycin   |
| Vector:                   | pCMV6-Entry (PS100001)   |
| E. coli Selection:        | Kanamycin (25 ug/mL)   |
| ORF Nucleotide Sequence:  | >RR204359 representing NM_001014104<br>Red=Cloning site Blue=ORF Green=Tags(s) |

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGCGGGGTGTGGTGTGGGCGGCCCGGAGGCGCGGGGCGAGCAGTGGCCTCGGTCCCCGGGCCCTGGGC  
CGGGTCCGCCCCCGCCGCCACCGCTGCTGTTGCTGCTACTGCTGCTGCTGGGCGGCGGAGCGCGCAGTA  
CTCCAGCGACCTGTGCAGCTGGAAGGGGAGTGGGCTCACCCGGGAGGCACACAGCAAGGAGGTGGAGCAG  
GTGTACCTGCGCTGCTCAGCAGGCTCTGTGGAATGGATGTACCAACCGGGCGCTCATTGTTAACCTAC  
GGCCCAACACCTTCTCACCTGCCAGAACTTGACTGTGTGCATCAAGCCTTTCAGGGACTCCTCTGGGGC  
CAATATTTATTTGAAAAAACTGGAGAACTAAGACTGTTGGTGCGGATGTCAGAGGCGAACCTGGCCAA  
GTGCAGTGCTTCAGCCTAGAGCAGGAGGCTTATTTGTGGAGGCCACACCCAGCAGGACATCAGCAGAA  
GGACCACAGGCTTCCAGTATGAGCTGATGAGTGGGCGAGGGGACTGGACCTGCACGTGCTCTGCCCC  
CTGTGACCTTGCAGCGACACTGAGGCTCCTTCCATCTGCACCAGTGACTTTGTTGTCGAGGCTTC  
ATCGAGGATGTCACCCATGTACCAGAACAGCAAGTGTGAGTACCTACGGGTGAGCAGGCTCCACA  
GGCAGAAGAGCAGGGTCTTCCAGCCAGCTCCTGAGGACAGTGGCCACTGGCTGGGCCATGCACAACACT  
GTTGCAGTGTGGAGTACGACCAGGCATGGAGAATTCCTTCTCACTGGACATGTGCACTTTGGGGAGGCA  
CAACTTGGATGTCCCCACGCTTATGAGTACTTTAAAAGATGTACAGGAAAGCAGAAGAAAGGGGCATAA  
ACCTTGTGAAATAAATATGGAG

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA



**Protein Sequence:** >RR204359 representing NM\_001014104  
 Red=Cloning site Green=Tags(s)

MRGVVWAARRRAGQQWPRSPGPGPPPPPLLLLLLLLLGGASAQYSSDLCSWKGSGLTREAHSKEVEQ  
 VYLRCSAGSVEWMYPTGALIVNLRPNTFSPAQNLTVCIKPFDRDSSGANIYLEKTGELRLLVRDVRGEPGQ  
 VQCFSLAQGLFVEATPQQDISRRTTGFQYELMSGQRGLDLHVL S APCRPCSDTEVLLAICTSDFVVRGF  
 IEDVTHVPEQQVSVIHLRVSRLHRQKSRVFPAPEDSGHWLGHVTLLQCGVVRPGHGEFLFTGHVHFGEA  
 QLGCAPRFSDFFQKMYRKAEEGINPCEINME

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shuttling:



\* The last codon before the Stop codon of the ORF

**ACCN:** NM\_001014104

**ORF Size:** 933 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\\_001014104.1](#), [NP\\_001014126.1](#)

**RefSeq Size:** 1380 bp

**RefSeq ORF:** 936 bp

**Locus ID:** 316842

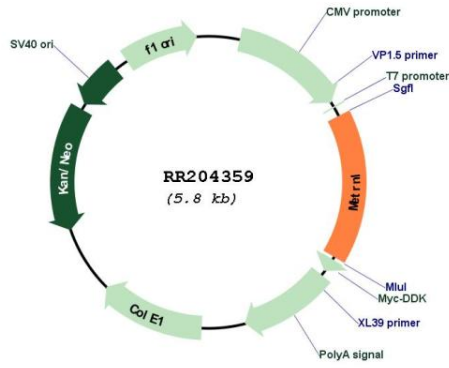
**UniProt ID:** [Q5R1L6](#)

**Cytogenetics:** 10q32.3

**MW:** 34.5 kDa

**Gene Summary:** Hormone induced following exercise or cold exposure that promotes energy expenditure. Induced either in the skeletal muscle after exercise or in adipose tissue following cold exposure and is present in the circulation. Able to stimulate energy expenditure associated with the browning of the white fat depots and improves glucose tolerance. Does not promote an increase in a thermogenic gene program via direct action on adipocytes, but acts by stimulating several immune cell subtypes to enter the adipose tissue and activate their prothermogenic actions. Stimulates an eosinophil-dependent increase in IL4 expression and promotes alternative activation of adipose tissue macrophages, which are required for the increased expression of the thermogenic and anti-inflammatory gene programs in fat. Required for some cold-induced thermogenic responses, suggesting a role in metabolic adaptations to cold temperatures (By similarity).[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for RR204359