

## Product datasheet for RC203997

### UCP2 (NM\_003355) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	UCP2 (NM_003355) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	UCP2
Synonyms:	BMIQ4; SLC25A8; UCPH
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC203997 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGGATCGCC**

ATGGTTGGGTTCAAGGCCACAGATGTGCCCCCTACTGCCACTGTGAAGTTTCTTGGGGCTGGCACAGCTG  
CCTGCATCGCAGATCTCATCACCTTTCTCTGGATACTGCTAAAGTCCGGTTACAGATCCAAGGAGAAAAG  
TCAGGGGCCAGTGC GCGCTACAGCCAGCGCCAGTACCGCGGTGTGATGGGCACCATTCTGACCATGGTG  
CGTACTGAGGGCCCCGAAGCCTCTACAATGGGCTGGTTGCCGGCTGCAGCGCCAAATGAGCTTTGCCT  
CTGTCCGCATCGGCCTGTATGATTCTGTCAAACAGTTCTACACCAAGGGCTCTGAGCATGCCAGCATTGG  
GAGCCGCCTCCTAGCAGGCAGCACACAGGTGCCCTGGCTGTGGCTGTGGCCAGCCACGGATGTGGTA  
AAGGTCGGATTCCAAGCTCAGGCCCGGGCTGGAGGTGGTCGGAGATACCAAAGCACCGTCAATGCCTACA  
AGACCATTGCCGAGAGGAAGGGTTCGGGGCCTCTGAAAGGGACCTCTCCCAATGTTGCTCGTAATGC  
CATTGTCAACTGTGCTGAGCTGGTGACCTATGACCTCATCAAGGATGCCCTCCTGAAAGCCAACCTCATG  
ACAGATGACCTCCCTTGCCACTTCACTTCTGCCTTTGGGGCAGGCTTCTGCACCACTGTGATCGCCTCCC  
CTGTAGACGTGGTCAAGACGAGATACATGAACTCTGCCCTGGGCCAGTACAGTAGCGTGGCCACTGTGC  
CCTTACCATGCTCCAGAAGGAGGGGCCCGAGCCTTCTACAAAGGTTTCATGCCCTCCTTCTCCGCTTG  
GGTTCCTGGAACGTGGTGTGTTGTCACCTATGAGCAGCTGAAACGAGCCCTCATGGCTGCCTGCACTT  
CCCGAGAGGCTCCCTTC

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA



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**Protein Sequence:** >RC203997 protein sequence  
Red=Cloning site Green=Tags(s)

MVGFKATDVPPTATVKFLGAGTAAACIADLITFPLDTAKVRLQIQGESQGPV RATAS AQYRGVMTILTMV  
 RTEGPRSLYNGL VAGLQRQMSFASVRIGLYDSVKQFYTKGSEHASIGSRLLAGSTTGALAVAVAQPTDVV  
 KVRFQAQARAGGRRYQSTVNAYKTIAREEGFRGLWKGTSPNVARNAIVNCAELVTYDLIKDALLKANLM  
 TDDLPCHF TSAFGAGFCTTVIASPVDVVKTRYMNSALGQYSSAGHCAL TMLQKEGPRAFYKGFMP SFLRL  
 GSWNVVMFVTYEQLKRALMAACTSREAPF

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mk6058\\_c11.zip](https://cdn.origene.com/chromatograms/mk6058_c11.zip)

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_003355

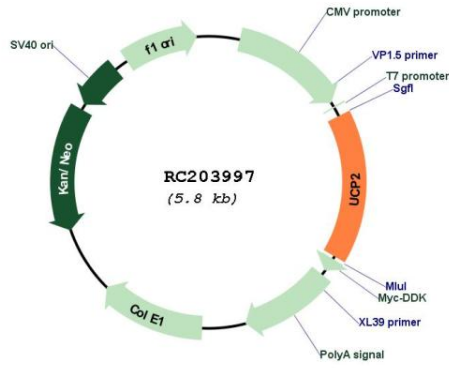
**ORF Size:** 927 bp

**OTI Disclaimer:** 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](mailto:custsupport@origene.com) or by calling 301.340.3188 option 3 for pricing and delivery.

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](#)

<b>OTI Annotation:</b>	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<a href="#">NM_003355.3</a>
<b>RefSeq Size:</b>	1646 bp
<b>RefSeq ORF:</b>	930 bp
<b>Locus ID:</b>	7351
<b>UniProt ID:</b>	<a href="#">P55851</a>
<b>Cytogenetics:</b>	11q13.4
<b>Domains:</b>	mito_carr
<b>Protein Families:</b>	Druggable Genome
<b>MW:</b>	33.2 kDa
<b>Gene Summary:</b>	Mitochondrial uncoupling proteins (UCP) are members of the larger family of mitochondrial anion carrier proteins (MACP). UCPs separate oxidative phosphorylation from ATP synthesis with energy dissipated as heat, also referred to as the mitochondrial proton leak. UCPs facilitate the transfer of anions from the inner to the outer mitochondrial membrane and the return transfer of protons from the outer to the inner mitochondrial membrane. They also reduce the mitochondrial membrane potential in mammalian cells. Tissue specificity occurs for the different UCPs and the exact methods of how UCPs transfer H <sup>+</sup> /OH <sup>-</sup> are not known. UCPs contain the three homologous protein domains of MACPs. This gene is expressed in many tissues, with the greatest expression in skeletal muscle. It is thought to play a role in nonshivering thermogenesis, obesity and diabetes. Chromosomal order is 5'-UCP3-UCP2-3'. [provided by RefSeq, Jul 2008]

Product images:



Circular map for RC203997