

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)

TTTGTAAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGC**

ATGGTTGGGTTCAAGGCCACAGATGTGCCCCCTACTGCCACTGTGAAGTTTCTTGGGGCTGGCACAGCTG
CCTGCATCGCAGATCTCATCACCTTTCTCTGGATACTGCTAAAGTCCGGTTACAGATCCAAGGAGAAAG
TCAGGGGCCAGTGC GCGCTACAGCCAGCGCCAGTACCGCGGTGTGATGGGCACCATTTGACCATGGTG
CGTACTGAGGGCCCCGAAGCCTCTACAATGGGCTGGTTGCCGGCTGCAGCGCCAAATGAGCTTTGCCT
CTGTCCGCATCGCCTGTATGATTCTGTCAAACAGTTCTACACCAAGGGCTCTGAGCATGCCAGCATTGG
GAGCCGCCTCCTAGCAGGCAGCACACAGGTGCCCTGGCTGTGGCTGTGGCCAGCCACGGATGTGGTA
AAGGTCCGATTCCAAGCTCAGGCCCGGGCTGGAGGTGGTCGGAGATACCAAAGCACCGTCAATGCCTACA
AGACCATTGCCCGAGAGGAAGGGTTCGGGGCCTCTGAAAGGGACCTCTCCCAATGTTGCTCGTAATGC
CATTGTCAACTGTGCTGAGCTGGTGACCTATGACCTCATCAAGGATGCCCTCCTGAAAGCCAACCTCATG
ACAGATGACCTCCCTTGCCACTTCACTTCTGCCTTTGGGGCAGGCTTCTGCACCACTGTCATCGCCTCCC
CTGTAGACGTGGTCAAGACGAGATACATGAACTCTGCCCTGGGCCAGTACAGTAGCGCTGGCCACTGTGC
CCTTACCATGCTCCAGAAGGAGGGGCCCCGAGCCTTCTACAAAGGGTTCATGCCCTCCTTCTCCGCTTG
GGTTCCTGGAACGTGGTGATGTTTCGTACCTATGAGCAGCTGAAACGAGCCCTCATGGCTGCCTGCACCT
CCCGAGAGGCTCCCTTC

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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

MVGFKATDVPPTATVKFLGAGTAACIADLITFPLDTAKVRLQIQGESQGPVRATASAQYRGVMTILTMV
 RTEGPRSLYNGLVAGLQRQMSFASVRIGLYDSVKQFYTKGSEHASIGSRLLAGSTTGALAVAVAQPTDVV
 KVRFQAQARAGGRRYQSTVNAYKTIAREEGFRGLWKGTSNPVARNAIVNCAELVTDLIKDALLKANLM
 TDDLPCHFSAFGAGFCTTVIASPVDVVKTRYMNSALGQYSSAGHCALTMLQKEGPRAFYKGFMPFSLRL
 GSWNVVMFVTYEQLKRALMAACTSREAPF

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6058_c11.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_003355

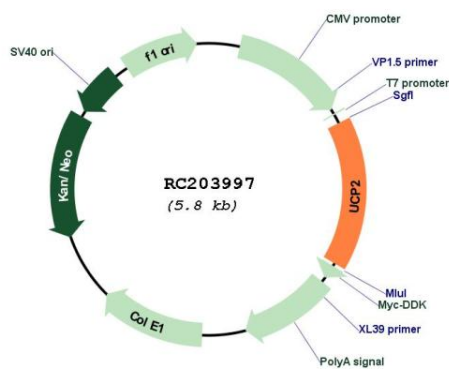
ORF Size: 927 bp

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 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](#)

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.
Note:	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
RefSeq:	<u>NM_003355.3</u>
RefSeq Size:	1646 bp
RefSeq ORF:	930 bp
Locus ID:	7351
UniProt ID:	<u>P55851</u>
Cytogenetics:	11q13.4
Domains:	mito_carr
Protein Families:	Druggable Genome
MW:	33.2 kDa
Gene Summary:	<p>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⁺/OH⁻ 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]</p>

Product images:



Circular map for RC203997