

## Product datasheet for SC317491

### UCP4 (SLC25A27) (NM\_004277) Human Untagged Clone

#### Product data:

|                           |   |
|---------------------------|---|
| Product Type:             | Expression Plasmids   |
| Product Name:             | UCP4 (SLC25A27) (NM_004277) Human Untagged Clone  |
| Tag:                      | Tag Free  |
| Symbol:                   | UCP4  |
| Synonyms:                 | UCP4  |
| Mammalian Cell Selection: | Neomycin  |
| Vector:                   | pCMV6-Entry (PS100001)  |
| E. coli Selection:        | Kanamycin (25 ug/mL)  |
| Fully Sequenced ORF:      | >SC317491 representing NM_004277.<br>Blue=Insert sequence Red=Cloning site Green=Tag(s) |

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GCTCGTTT TAGTGAACCGTCAGAATTTTGT AATACGACTCACTATAGGCGGCCGGGAATTCGTCGACTG
GATCCGGTACCGAGGAGATCTGCCGCC GCGATCGCC
ATGTCCGTC CCCGGAGGAGGAGGAGGCTTTT GCGCTGACCCAGAGATGGCCCCGAGCGAAATTC
CTACTGTCCGGCTGCGCGGCTACCGTGGCCGAGCTAGCAACCTTTCCCTGGATCTCACAAAACTCGA
CTCCAAATGCAAGGAGAAGCAGCTCTTGCTCGGTTGGGAGACGGTGAAGAGAATCTGCCCCCTATAGG
GGAATGGTGCACAGCTCTAGGGATCATTGAAGAGGAAGGCTTTCTAAAGCTTTGGCAAGGAGTGACA
CCCGCCATTTACAGACACGTAGTGTATTCTGGAGGTGCAATGGTCACATATGAACATCTCCGAGAGGTT
GTGTTTGGCAAAAGTGAAGATGAGCATTATCCCTTTGGAAATCAGTCATTGGAGGGATGATGGCTGGT
GTTATTGGCCAGTTTTTAGCCAATCCAACCTGACCTAGTGAAGGTTGAGATGCAAAATGGAAGGAAAAAGG
AAACTGGAAGGAAAACCATTTGCGATTTCTGGTGTACATCATGCATTTGCAAAAATCTTAGCTGAAGGA
GGAATACGAGGGCTTTGGGCAGGCTGGGTACCCAATATACAAAGAGCAGCACTGGTGAATATGGGAGAT
TTAACCACTTATGATACAGTGAACACTACTTGGTATTGAATACACCACTTGAGGACAATATCATGACT
CACGGTTTATCAAGTTTATGTTCTGGACTGGTAGCTTCTATTCTGGGAACACCAGCCGATGTCATCAA
AGCAGAATAATGAATCAACCACGAGATAAACAAGGAAGGGGACTTTTGTATAAATCATCGACTGACTGC
TTGATTCAGGCTGTTCAAGGTGAAGGATTCATGAGTCTATATAAAGGCTTTTACCATCTGGCTGAGA
ATGACCCCTTGGTCAATGGTGTCTGGCTTACTTATGAAAAAATCAGAGAGATGAGTGGAGTCAGTCCA
TTTTAA
ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGAT
TACAAGGATGACGACGATAAGGTTTAAACGGCCGGC
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|                    |           |
|--------------------|-----------|
| Restriction Sites: | Sgfl-MluI |
| ACCN:              | NM_004277 |
| Insert Size:       | 972 bp    |



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|                               |   |
|-------------------------------|---|
| <b>OTI Disclaimer:</b>        | Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).  |
| <b>OTI Annotation:</b>        | This TrueClone is provided through our Custom Cloning Process that includes sub-cloning into OriGene's pCMV6 vector and full sequencing to provide a non-variant match to the expected reference without frameshifts, and is delivered as lyophilized plasmid DNA.  |
| <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_004277.4</a>   |
| <b>RefSeq Size:</b>           | 2986 bp   |
| <b>RefSeq ORF:</b>            | 972 bp  |
| <b>Locus ID:</b>              | 9481  |
| <b>UniProt ID:</b>            | <a href="#">O95847</a>  |
| <b>Cytogenetics:</b>          | 6p12.3  |
| <b>Domains:</b>               | mito_carr   |
| <b>Protein Families:</b>      | Druggable Genome  |
| <b>MW:</b>                    | 36.1 kDa  |

**Gene Summary:**

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. Transcripts of this gene are only detected in brain tissue and are specifically modulated by various environmental conditions. Alternative splicing results in multiple transcript variants.[provided by RefSeq, Feb 2011]

Transcript Variant: This variant (1) encodes the longest isoform (1). Sequence Note: This RefSeq record was created from transcript and genomic sequence data to make the sequence consistent with the reference genome assembly. The genomic coordinates used for the transcript record were based on transcript alignments.