

Product datasheet for **MG204339**

Ucp1 (NM_009463) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Ucp1 (NM_009463) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Ucp1
Synonyms:	AI385626; Slc25a7; Ucp
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>MG204339 representing NM_009463 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGTGAACCCGACAACCTCCGAAGTGCAACCCACCATGGGGTCAAGATCTTCTCAGCCGGAGTTTCAG
CTTGCCTGGCAGATATCATCACCTTCCCGCTGGACTGCCAAAGTCCGCCTTCAGATCCAAGGTGAAGG
CCAGGCTTCCAGTACCATTAGGTATAAAGGTGCCTAGGGACCATCACCCCTGGCAAAAACAGAAGGA
TTGCCGAAACTGTACAGCGGTCTGCCTGCGGGCATTAGAGGCAAATCAGCTTTGCCTCACTCAGGATTG
GCCTCTACGACTCAGTCCAAGAGTACTTCTCTCAGGGAGAGAAACACCTGCCTCTCGGAAACAAGAT
CTCAGCCGGCTTAATGACTGGAGGTGTGGCAGTGTTCATTGGGCAGCCTACAGAGGTCGTGAAGGTCAGA
ATGCAAGCCCAGAGCCATCTGCATGGGATCAAACCCCGCTACACGGGGACCTACAATGCTTACAGAGTTA
TAGCCACCACAGAAAGCTTGTAACACTTTGAAAGGGACGACCCTAATCTAATGAGAAATGTCATCAT
CAATTGTACAGAGCTGGTAACATATGACCTCATGAAGGGGCCCTTGTAACAACAAAATACTGGCAGAT
GACGTCCCCTGCCATTTACTGTCAGTCTTGTGGCCGGTTTTGCACCACACTCTGGCCTCTCCAGTGG
ATGTGGTAAAAACAAGATTCATCAACTCTGCCAGGACAGTACCAAGCGTACCAAGCTGTGCGATGTC
CATGTACACCAAGGAAGGACCGCGCCTTTTCAAAGGGTTTGTGGCTCTTTTCTGCGACTCGGGTCC
TGGAACGTCATCATGTTTGTGTGCTTTGAACAGCTGAAAAAGAGCTGATGAAGTCCAGACAGACAGTGG
ATTGTACCACA

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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Protein Sequence: >MG204339 representing NM_009463
 Red=Cloning site Green=Tags(s)

MVNPTTSEVQPTMGVKIFSAGVSACLADIITFPLDTAKVRLQIQGEGQASSTIRYKGVLTITTLAKTEG
 LPKLYSGLPAGIQRQISFASLRIGLYDSVQEYFSSGRETPASLGNKISAGLMTGGVAVFIGQPTEVVKVR
 MQAQSHLHGKIPRYTGTYNAYRVIATTESLSTLWKGTPNLMRNVIIINCTELVTYDLMK GALVNNKILAD
 DVPCHLLSALVAGFCTLLASPVDVVKTRFINSLPGQYSPVSCAMSMYTKEGPTAFFKGFVASFLRLGS
 WNVIMFVCFEQLKELMKSRQTVDCCT

TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_009463

ORF Size: 921 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_009463.3](#)

RefSeq Size: 1249 bp

RefSeq ORF: 924 bp

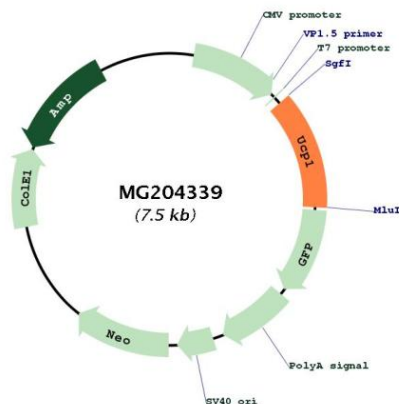
Locus ID: 22227

UniProt ID: [P12242](#)

Cytogenetics: 8 39.65 cM

Gene Summary: Mitochondrial protein responsible for thermogenic respiration, a specialized capacity of brown adipose tissue and beige fat that participates to non-shivering adaptive thermogenesis to temperature and diet variations and more generally to the regulation of energy balance (PubMed:9139827, PubMed:19187776, PubMed:23063128, PubMed:27027295). Functions as a long-chain fatty acid/LCFA and proton symporter, simultaneously transporting one LCFA and one proton through the inner mitochondrial membrane. However, LCFAs remaining associated with the transporter via their hydrophobic tails, it results in an apparent transport of protons activated by LCFAs. Thereby, dissipates the mitochondrial proton gradient and converts the energy of substrate oxydation into heat instead of ATP (PubMed:23063128). Regulates the production of reactive oxygen species/ROS by mitochondria (PubMed:20416274, PubMed:20466728).[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for MG204339