

Product datasheet for **RC209576**

COQ3 (NM_017421) Human Tagged ORF Clone

Product data:

Product Type: Expression Plasmids
Product Name: COQ3 (NM_017421) Human Tagged ORF Clone
Tag: Myc-DDK
Symbol: COQ3
Synonyms: bA9819.1; DHHBMT; DHHBMTASE; UG0215E05
Mammalian Cell Selection: Neomycin
Vector: pCMV6-Entry (PS100001)
E. coli Selection: Kanamycin (25 ug/mL)
ORF Nucleotide Sequence: >RC209576 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGATCGCC**

ATGTGGAGTGGCCGTAAGCTGGGCTCCTCCGGGGTTGGTTTTTAAGAGTGCTGGGGCTGGAGGCTGTA
 ATACAAAAGCTGCGCGTCCCTTAATTTCTCGCGGTTTATGTGAAGAACCAGCTCAGTGGGACTTACA
 GATTAACACAGGGGTTTTCAATGAATACAGAACCATATGGTTCAAATCTACAGGACGATCTTTCTGT
 TTGAACAGAATAAAGAGTTTCAGGTACCCTTGGGCGAGACTGTACAGTACTTCCCAAACCACTGTCGACA
 GCGGTGAGGTA AAAACCTTCTTGGCCCTGGCTCACAATGGTGGGATGAACAAGGAGTATATGCACCTCT
 TCATTCATGAATGACCTGAGGGTGCCATTTATTAGGGACAATCTCTGAAAACAATTCCTAATCACCAG
 CCAGGAAAACCTTTGTTGGGGATGAAGATTCTTGACGTTGGCTGTGGTGGGCTGTTAACTGAACCTC
 TAGGGCGGCTTGGGGCTTCAAGTATTGGAATCGACCCTGTGGATGAGAACATTA AACAGCACAATGCCA
 TAAATCATTTGATCCAGTCCCTGGATAAGAGAATAGAGTACAGAGTGTGTTCCCTGGAAGAGATTGTGGAA
 GAGACTGCAGAAACATTTGATGCTGTTGTAGCTTCTGAAGTTGTAGAACATGTGATTGATCTAGAAACAT
 TTTTACAGTGTGCTGTCAAGTGTAAAACCCGGTGGTTCTTTATTCATTACTACAATCAACAAAACACA
 ACTTTCTATGCCTTGGGAATTTGTTTTTTCAGAGCAAATGCAGGTATTGTACAAAAGGTA CTACATA
 TGGGAAAGTTTGTTCACCTGAAACACTAGAGAGCATTCTGGAATCAAATGGTCTGTCAGTTCAAACAG
 TGGTAGGAATGCTCTATAACCCCTTCTCAGTTACTGGCATTGGAGTGAAAATACCAGCCTTAACCTATGC
 AGCTCATGCTGTGAAATCCAGGGTCCAGGAACCCAGCCTCTGCTGAGTTTGTTTTAAAGGGAGAAAACA
 GAAGAGCTCCAAGCTAATGCCTGCACCAATCCAGCTGTGCATGAAAAGCTGAAGAAA

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA



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Protein Sequence: >RC209576 protein sequence
 Red=Cloning site Green=Tags(s)

MWSGRKLGSSGGWFLRVLGPGGCNTKAARPLISSAVYVKNQLSGTLQIKPGVFNEYRTIWFKSYRTIFSC
 LNRIKSFYRPWARLYSTSQTTVDSGEVKTFLALAHKWDEQGVYAPLHSMNDRVPFIRDNLLKTIPNHQ
 PGKPLLGMKILDVGGCGLLTEPLGRLGASVIGIDPVDENIKTAQCHKSFDPVLDKRIEYRVCSLEEIVE
 ETAETFDVAVVASEVVEHVIDLETFLQCCQVLKPGGSLFITTTINKTQLSYALGIVFSEIAGIVPKGTHT
 WEKFVSPETLESILESNGLSVQTVVGMLYNPFSGYWHWSENTSLNYAAHAVKSRVQHPASAEFVLKGET
 EELQANACTNPAVHEKLLK

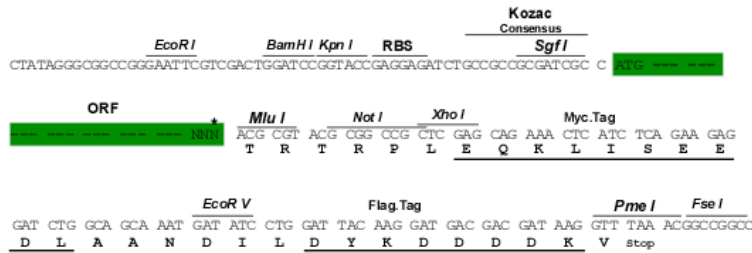
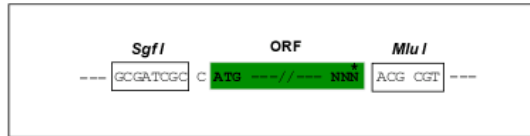
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6525_b06.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



* The last codon before the Stop codon of the ORF

ACCN: NM_017421

ORF Size: 1107 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_017421.4](#)

RefSeq Size: 1265 bp

RefSeq ORF: 1110 bp

Locus ID: 51805

UniProt ID: [Q9NZJ6](#)

Cytogenetics: 6q16.2

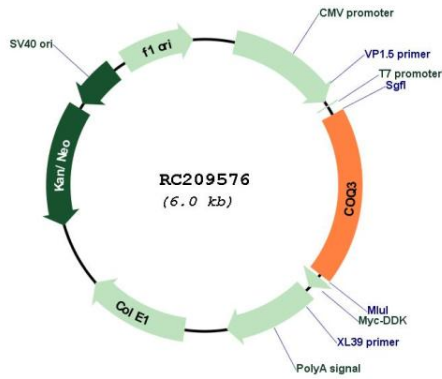
Protein Families: Druggable Genome

Protein Pathways: Metabolic pathways, Ubiquinone and other terpenoid-quinone biosynthesis

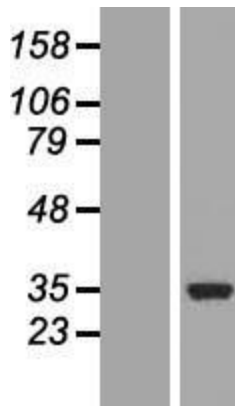
MW: 41 kDa

Gene Summary: Ubiquinone, also known as coenzyme Q, or Q, is a critical component of the electron transport pathways of both eukaryotes and prokaryotes (Jonassen and Clarke, 2000 [PubMed 10777520]). This lipid consists of a hydrophobic isoprenoid tail and a quinone head group. The tail varies in length depending on the organism, but its purpose is to anchor coenzyme Q to the membrane. The quinone head group is responsible for the activity of coenzyme Q in the respiratory chain. The *S. cerevisiae* COQ3 gene encodes an O-methyltransferase required for 2 steps in the biosynthetic pathway of coenzyme Q. This enzyme methylates an early coenzyme Q intermediate, 3,4-dihydroxy-5-polyprenylbenzoic acid, as well as the final intermediate in the pathway, converting demethyl-ubiquinone to coenzyme Q. The COQ3 gene product is also capable of methylating the distinct prokaryotic early intermediate 2-hydroxy-6-polyprenyl phenol.[supplied by OMIM, Mar 2008]

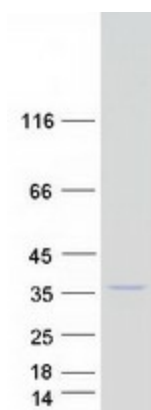
Product images:



Circular map for RC209576



Western blot validation of overexpression lysate (Cat# [LY413779]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC209576 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified COQ3 protein (Cat# [TP309576]). The protein was produced from HEK293T cells transfected with COQ3 cDNA clone (Cat# RC209576) using MegaTran 2.0 (Cat# [TT210002]).