

Product datasheet for **RC220733**

COASY (NM_025233) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Tag:	Myc-DDK
Symbol:	COASY
Synonyms:	DPCK; NBIA6; NBP; PCH12; pOV-2; PPAT; UKR1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



[View online »](#)

ORF Nucleotide Sequence:

>RC220733 representing NM_025233
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGCCGTATTCCGGTCGGGTCTCTGGTGCTGACGACGCCGCTGGCCTCCCTAGCCCCTCGCCTGGCCT
 CCATCCTGACCTCGGCGGCCCGGCTGGTGAATCACACACTCTATGTTACCTGCAGCCGGGCATGAGCCT
 GGAGGGCCCGGCTCAGCCCCAGTACAGCCCCGTGACGGCCACGTTTGAGGTTCTTGATTTTCATCAGGCAC
 CTCTATGCTGGCGCCGACGTCCACAGGCACTTGGACGTGAGAATCCTACTGACCAATATCCGAACCAAGA
 GCACCTTTCTCCCTCCCTGCCACCTCAGTCCAGAATCTCGCCACCCGCCAGAAGTCGTGTTGACAGA
 TTTCCAGACCCTGGATGGAAGCCAGTACAACCCGGTCAAACAGCAGCTAGTGCCTTACGCCACCAGCTGT
 TACAGCTGTTGTCGCGACTGGCCTCGGTGCTGCTATACTCCGATTATGGGATAGGAGAAGTGCCCGTGG
 AGCCCTGGATGTCCCTTACCCTCCACGATCAGGCCAGCTTCCCCCGTGGCCGGGTCTCCAAGCAGCC
 GGTGCGTGGCTACTACCGTGGCGCTGTCGGTGGCAGCTTTGACCGCTGCACAACGCCACAAGGTGTTG
 CTAGTGTGCGGTGCATCCTGGCCAGGAGCAGCTTGTGGTGGGAGTAGCAGACAAAGATCTGTTGAAGA
 GCAAGTTGCTCCCTGAGCTGCTCCAACCTTATACAGAACGTGTGGAACATCTGAGTGAATTCCTGGTGGA
 CATCAAGCCCTCCTTGACTTTTGATGTCATCCCTGCTGGACCCCTATGGGCCCGCTGGCTCTGACCCC
 TCCCTGGAGTTCCTGGTGGTCAGCGAGGAGACCTATCGTGGGGGATGGCCATCAACCGCTTCCGCTTG
 AGAATGACCTGGAGGAATTGCTTTGTACCAGATCCAGCTGCTGAAGGACCTCAGACATACGGAGAATGA
 AGAGGACAAAGTCAGCTCCTCCAGCTTCCGCCAGCGAATGTTGGGGAACCTGCTTCGGCTCCATATGAA
 AGGCCAGAGCTCCACATGTCTCTATGTAATTGGGCTGACTGGCATCAGTGGCTCTGGGAAGAGCTCAA
 TAGCTCAGCGACTGAAGGGCCTGGGGCGTGTTCATTGACAGTGACCACCTGGGTATCGGGCCTATGC
 CCCAGGTGGCCCTGCCTACCAGCCTGTGGTGGAGGCCTTTGGAACAGATATTCTCCATAAAGATGGCATC
 ATCAACAGGAAGGTCCTAGGCAGCCGGGTGTTTGGGAATAAGAAGCAGCTGAAGATACTACGGACATTA
 TGTGGCAATTATCGAAAGCTGGCCCGAGAGGAGATGGATCGGGCTGTGGCTGAGGGAAAGCGTGTGTG
 TGTGATTGATGCCGTGTGTTGCTTGAAGCCGGCTGGCAGAACCTGGTCCATGAGGTGTGGACTGCTGTC
 ATCCCAGAGACTGAGGCTGTAAAGCGCATTGTGGAGAGGATGGCCTCAGTGAAGCCGGCTCAAAGCC
 GGCTGCAGAGCCAGATGAGCGGGCAGCAGCTTGTGGAACAGAGCCACGTGGTGTGACACCTTGTGGGA
 GCCGCATATACCCAACGCCAGGTGGAGAAAGCCTGGGCCCTCTTGCAAGCGCATTCCAAGACTCAT
 CAGGCCCTCGAC

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC220733 representing NM_025233
 Red=Cloning site Green=Tags(s)

MAVFRSGLLVLTPLASLAPRLASILTSARLVNHTLYVHLQPGMSLEGPAQPQYSPVQATFEVLDFITH
 LYAGADVHRHLDVRILLTNIRKSTFLPPLPTSVQNLAPPEVLTDFQTLDGSGYNPVKQQLVRYATSC
 YSCCPRLASVLLYSYDYGIEVPVEPLDVPLSTIRPASPVAGSPKQPVRYRGAVGGTFDRLHNAHKVL
 LSVACILAEQLVVGADKDLLKSKLLPELLQPYTERVEHLSEFLVDIKPSLTFDVIPLDPYPAGSDP
 SLEFLVSEETYRGMAINRFRLNDLEELALYQIQLLKDLRHTENEEDKVSSSSFRQRLGNLLRPPYE
 RPELPTCLYVIGLTGISGSGKSSIAQRLKGLGAFVIDSDHLGHRAYAPGGPAYQPVVEAFGTDILHKDGI
 INRKVLGSRVFGNKKQLKILTDIMWPIIAKLAREEMDRAVAEGKRVVIDAAVLLEAGWQNLVHEVWTAV
 IPETEAVRRIVERDGLSEAAQSRQLSQMSGQQLVEQSHVVLSTLWEPHITQRQVEKAWALLQKRIPKTH
 QALD

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms:

https://cdn.origene.com/chromatograms/mk6044_a11.zip

Restriction Sites:

SgfI-MluI

Cloning Scheme:


ACCN: NM_025233

ORF Size: 1692 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.

Note: Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

RefSeq: [NM_025233.4](#), [NP_079509.4](#)

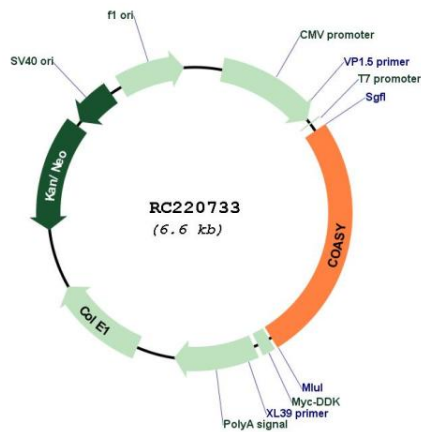
RefSeq Size: 2470 bp

RefSeq ORF: 1695 bp

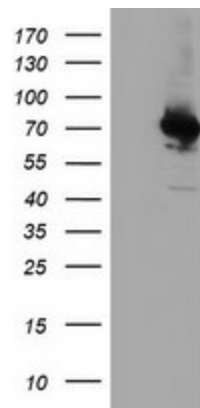
Locus ID: 80347

UniProt ID:	<u>Q13057</u>
Cytogenetics:	17q21.2
Domains:	CoaE, CTP_transf_2
Protein Pathways:	Metabolic pathways, Pantothenate and CoA biosynthesis
MW:	62.1 kDa
Gene Summary:	Coenzyme A (CoA) functions as a carrier of acetyl and acyl groups in cells and thus plays an important role in numerous synthetic and degradative metabolic pathways in all organisms. In eukaryotes, CoA and its derivatives are also involved in membrane trafficking and signal transduction. This gene encodes the bifunctional protein coenzyme A synthase (CoAsy) which carries out the last two steps in the biosynthesis of CoA from pantothenic acid (vitamin B5). The phosphopantetheine adenylyltransferase domain of this bifunctional protein catalyzes the conversion of 4'-phosphopantetheine into dephospho-coenzyme A (dpCoA) while its dephospho-CoA kinase domain completes the final step by phosphorylating dpCoA to form CoA. Mutations in this gene are associated with neurodegeneration with brain iron accumulation (NBIA). Alternative splicing results in multiple isoforms. [provided by RefSeq, Apr 2014]

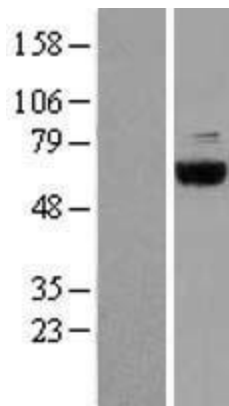
Product images:



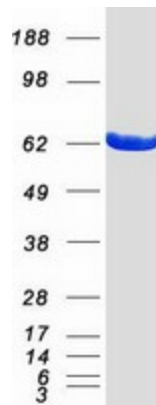
Circular map for RC220733



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY COASY (Cat# RC220733, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-COASY (Cat# [TA503344]). Positive lysates [LY403068] (100ug) and [LC403068] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY403068]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC220733 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified COASY protein (Cat# [TP320733]). The protein was produced from HEK293T cells transfected with COASY cDNA clone (Cat# RC220733) using MegaTran 2.0 (Cat# [TT210002]).