

## Product datasheet for **RC215228**

### COASY (NM\_001042529) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	COASY (NM_001042529) Human Tagged ORF Clone
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)



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**ORF Nucleotide Sequence:**

>RC215228 ORF sequence  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**GCGATCGCC**

ATGGCCGTATCCGGTCGGGTCTCTGGTGTGACGACGCGCTGGCCTCCCTAGCCCTCGCCTGGCCT  
 CCATCCTGACCTCGGCGGCCGGCTGGTGAATCACACTCTATGTTACCTGCAGCCGGGCATGAGCCT  
 GGAGGGCCCGGCTCAGCCCCAGTACAGCCCGTGCAGGCCACGTTTGAGGTTCTTGATTTATCAGCGAC  
 CTCTATGCTGGCGCCGACGTCCACAGGCACTTGGACGTGAGAATCCTACTGACCAATATCCGAACCAAGA  
 GCACCTTTCTCCCTCCCTGCCACCTCAGTCCAGAATCTCGCCACCCGCCAGAAGTCTGTTGACAGA  
 TTTCCAGACCCTGGATGGAAGCCAGTACAACCCGGTCAAACAGCAGCTAGTGCCTTACGCCACCAGCTGT  
 TACAGCTGTTGTCGCGACTGGCCTCGGTGCTGCTATACTCCGATTATGGGATAGGAGAAGTGCCCGTGG  
 AGCCCTGGATGTCCCTTACCCTCCACGATCAGGCCAGCTTCCCCGTGGCCGGGTCTCCAAGCAGCC  
 GGTGCGTGGCTACTACCGTGGCGCTGTCGGTGGCAGCTTGGACCGCTGCACAACGCCACAAGGTGTTG  
 CTAGTGTGCGGTGCATCCTGGCCAGGAGCAGCTTGTGGTGGGAGTAGCAGACAAAGATCTGTTGAAGA  
 GCAAGTTGCTCCCTGAGCTGCTCCAACCTTATACAGAACGTGTGGAACATCTGAGTGAATTCCTGGTGG  
 CATCAAGCCCTCCTTGACTTTTGATGTCATCCCCCTGCTGGACCCCTATGGGCCCGCTGGCTCTGACCC  
 TCCCTGGAGTTCTGGTGGTCAGCGAGGAGACCTATCGTGGGGGATGGCCATCAACCGCTTCCGCTTG  
 AGAATGACCTGGAGGAATTGCTTTGTACCAGATCCAGCTGCTGAAGGACCTCAGACATACGGAGAATGA  
 AGAGGACAAAGTCAGCTCCTCCAGCTCCGCCAGCGAATGTTGGGAACTGCTTCGGCTCCATATGAA  
 AGGCCAGAGCTCCCACATGTCTCTATGTAATTGGCTGACTGGCATCAGTGGCTCTGGGAAGAGCTCAA  
 TAGCTCAGCGACTGAAGGGCTGGGGCGTTTGTATTGACAGTACCACCTGGGTCATCGGGCTATGC  
 CCCAGTGGCCCTGCCTACCAGCCTGTGGTGGAGGCCTTTGGAACAGATATTCTCCATAAAGATGGCATC  
 ATCAACAGGAAGTCTAGGACGCGGGTGTGGGAATAAGAAGCAGCTGAAGATACTACGGACATTA  
 TGTGGCAATTATCGAAAGCTGGCCCGAGAGGAGATGGATCGGGCTGTGGCTGAGGAAAGCGTGTGTG  
 TGTGATTGATGCCGTGTGTTGTTGAAGCCGGCTGGCAGAACCTGGTCCATGAGGTGTGGACTGCTGTC  
 ATCCAGAGACTGAGGCTGTAAGACGATTGTGGAGAGGATGGCCTCAGTGAAGCCGGCTCAAAGCC  
 GGCTGCAGAGCCAGATGAGCGGGCAGCAGCTTGTGGAACAGGCCACGTGGTGTGCTCAGCACCTTGTGG  
 GCCGATATACCCAACGCCAGGTGGAGAAAGCCTGGGCCCTTGCAGAAGCGCATTCCAAGACTCAT  
 CAGGCCCTCGAC

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RC215228 protein sequence  
 Red=Cloning site Green=Tags(s)

MAVFRSGLLVLTPLASLAPRLASILTSAARLVNHTLYVHLQPGMSLEGPAQPQYSPVQATFEVLDIFITH  
 LYAGADVHRHLDVRIILLTNIRTKSTFLPPLPTSVQNLAHPPPEVLTDFQTLDGSQYNPVKQQLVRYATSC  
 YSCCPRLASVLLYSDYIGIEVPEPLDVPLPSTIRPASPVAGSPKQPVRYRGAVGGTFDRLHNAHKVL  
 LSVACILAEQQLVVGVDKDLLKSKLPELLQPYTERVEHLSEFLVDIKPSLTFDVIPLLDYPGAGSDP  
 SLEFLVSEETYRGGMAINRFRENDLEELALYQIQLLDRHTENEEDKVSSSSFRQRLGNLLRPPYE  
 RPELPTCLYVIGLTGISGSKSSIAQRLKGLGAFVIDSDHLGHRAYAPGGPAYQPVVEAFGTDILHKDGI  
 INRKVLGSRVFGNKKQLKILTDIMWPIIAKLAREEMDRAVAEGKRVCVIDAAVLLEAGWQNLVHEVWTAV  
 IPETEAVRRIVERDGLSEAAAQSRQLSQMSGQQLVEQSHVVLSTLWEPHITQRQVEKAWALLQKRIPKTH  
 QALD

**TR**TRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:**

[https://cdn.origene.com/chromatograms/mk6044\\_a11.zip](https://cdn.origene.com/chromatograms/mk6044_a11.zip)

**Restriction Sites:**

Sgfl-Mlul

**Cloning Scheme:**


**ACCN:** NM\_001042529

**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.

**RefSeq:** [NM\\_001042529.3](#)

**RefSeq Size:** 2182 bp

**RefSeq ORF:** 1695 bp

**Locus ID:** 80347

**UniProt ID:** [Q13057](#)

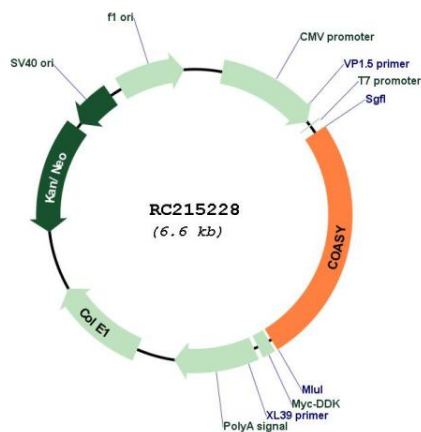
**Cytogenetics:** 17q21.2

**Protein Pathways:** Metabolic pathways, Pantothenate and CoA biosynthesis

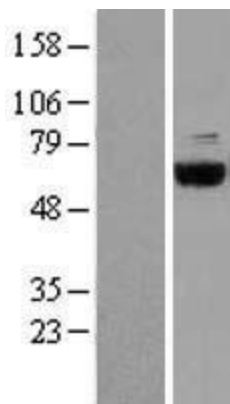
**MW:** 62.4 kDa

**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 adenyltransferase 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 RC215228



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# [TP315228]). The protein was produced from HEK293T cells transfected with COASY cDNA clone (Cat# RC215228) using MegaTran 2.0 (Cat# [TT210002]).