

## Product datasheet for **RG229299**

### COASY (NM\_001042532) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	COASY (NM_001042532) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	COASY
Synonyms:	DPCK; NBIA6; NBP; PCH12; pOV-2; PPAT; UKR1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>RG229299 representing NM\_001042532  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**GCGATCGCC**

ATGAGGACACCAAGGCTTAGAGCACAGCCCGAGGCGCCGCTACCAGGCCCCGTCGCCCTCCCCCGGCTC  
 CTGTCGGCCTGGGACGATGGCCGATTCCGGTCGGGTCTCCTGGTGCTGACGACCCGCTGGCCTCCCT  
 AGCCCCCTCGCCTGGCCTCCATCCTGACCTCGGGCGCCCGCTGGTGAATCACACTCTATGTTACCTG  
 CAGCCGGGCATGAGCCTGGAGGGCCCGCTCAGCCCCAGTCCAGCCCCGTCAGGCCACGTTTGAGGTTT  
 TTGATTTTCATCACGCACCTCTATGCTGGCGCCGACGTCCACAGGCACTTGGACGTGAGAATCCTACTGAC  
 CAATATCCGAACCAAGAGCACCTTTCTCCCTCCCTGCCACCTCAGTCCAGAATCTCGCCACCCGCCA  
 GAAGTCGTGTTGACAGATTTCCAGACCTGGATGGAAGCCAGTACAACCCGGTCAAACAGCAGCTAGTGC  
 GTTACGCCACCAGCTGTTACAGCTGTTGTCGGGACTGGCCTCGGTGCTGCTATACTCCGATTATGGGAT  
 AGGAGAAGTGCCCGTGGAGCCCCGGATGTCCCCTTACCCTCCAGATCAGGCCAGCTTCCCCCGTGGCC  
 GGGTCTCCAAAGCAGCCGGTGCCTGGTACTACCGTGGCCTGTCGGTGGCACGTTTGACCCGCTGCACA  
 ACGCCCAAGGTGTTGCTCAGTGTGCGGTGCATCCTGGCCCAGGAGCAGCTTGTGGTGGGAGTAGCAGA  
 CAAAGATCTGTTGAAGAGCAAGTTGCTCCCTGAGCTGCTCAAACCTTATACAGAACGTGTGGAACATCTG  
 AGTGAATTCCTGGTGGACATCAAGCCCTCCTTGACTTTTGATGTCATCCCCCTGCTGGACCCCTATGGGC  
 CCGCTGGCTCTGACCCCTCCCTGGAGTTCTGGTGGTCAAGGAGACCTATCGTGGGGGGATGGCCAT  
 CAACCGCTTCCGCTTGAAGATGACCTGGAGGAAGTGTGTTGTACCAGATCCAGCTGCTGAAGGACCTC  
 AGACATACAGAGAATGAAGAGGACAAAGTCAGCTCCTCCAGCTCCGCCAGCGAATGTTGGGGAACCTGC  
 TTCGGCTCCATATGAAGGCCAGAGCTCCACACATGTCTATGTAATTGGGCTGACTGGCATCAGTGG  
 CTCTGGGAAGAGCTCAATAGCTCAGCGACTGAAGGGCCTGGGGGGCTTTGTCATTGACAGTGACCACCTG  
 GGTGATCGGGCCTATGCCCCAGGTGGCCCTGCCTACCAGCCTGTGGTGGAGGCCTTTGGAACAGATATTC  
 TCCATAAAGATGGCATCATCAACAGGAAGTCTAGGCAGCCGGGTGTTGGGAATAAGAAGCAGCTGAA  
 GATACTCACGGACATTATGTGGCAATTATCGAAAGCTGGCCGAGAGGAGATGGATCGGGCTGTGGCT  
 GAGGGAAGCGTGTGTGTGATTGATGCCGCTGTGTTGCTTGAAGCCGGCTGGCAGAACCTGGTCCATG  
 AGGTGTGGACTGCTGTCATCCCAGAGACTGAGGCTGTAAGACGCATTGTGGAGAGGGATGGCCTCAGTGA  
 AGCCGGGCTCAAAGCCGGCTGCAGAGCCAGATGAGCGGGCAGCAGCTTGTGGAACAGAGCCACGTGGT  
 CTCAGCACCTTGTGGAGCCGATATCACCAACGCCAGGTGGAGAAAGCCTGGGCCCTCTGCAGAAGC  
 GCATCCCAAGACTCATCAGGCCCTCGAC

**ACGCGTACGCGGCCGCTCGAG** - GFP Tag - GTTTAA

**Protein Sequence:**

>RG229299 representing NM\_001042532  
 Red=Cloning site Green=Tags(s)

MRTPLRAQPRGAVYQAPSPPPAPVGLGSMVFRSGLLVLTTPLASLAPRLASILTSAARLVNHTLYVHL  
 QPGMSLEGPAQPQSSPVQATFEVLDLFIHLYAGADVHRHLDVRIILLTNIRTKSTFLPPLPTSVQNLAHPP  
 EVVLTDFQTLDGSYNPVKQQLVRYATSCYSCCPRLASVLLYSDYGIQVEPVEPLDVPLPSTIRPASPVA  
 GSPKQPVRYRGAAGVGGTFDRLHNAHKVLLSVACILAEQLVVGVDKDLLKSKLLPELLQPYTERVEHL  
 SEFLVDIKPSLTFDVIPLLDPYGPAGSDPSLEFLVVSEETYRGGMAINRFRLENDLEELALYQIQLLKD  
 RHTENEEDKVSSSFQRMLGNLLRPPYERPELPTCLYVIGLTIISGSGKSSIAQRLKGLGAFVIDSDHL  
 GHRAYAPGGPAYQPVVEAFGTDILHKDGIINRKVLGSRVFGNKKQLKILTDIMWPIIAKLAREEMDRAVA  
 EGKRVCVIDAAVLLEAGWQNLVHEVWTAVIPETEAVRRIVERDGLSEAAAQSRQLSQMSGQQLVEQSHV  
 LSTLWEPHITQRQVEKAWALLQKRIPKTHQALD

**TRTRPLE** - GFP Tag - V

**Restriction Sites:**

SgfI-MluI



<b>OTI Disclaimer:</b>	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. <a href="#">More info</a>
<b>OTI Annotation:</b>	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
<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_001042532.4</a>
<b>RefSeq Size:</b>	2331 bp
<b>RefSeq ORF:</b>	1782 bp
<b>Locus ID:</b>	80347
<b>UniProt ID:</b>	<a href="#">Q13057</a>
<b>Cytogenetics:</b>	17q21.2
<b>Protein Pathways:</b>	Metabolic pathways, Pantothenate and CoA biosynthesis
<b>Gene Summary:</b>	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]