

## Product datasheet for **RG209469**

### CAD (NM\_004341) Human Tagged ORF Clone

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** CAD (NM\_004341) Human Tagged ORF Clone  
**Tag:** TurboGFP  
**Symbol:** CAD  
**Synonyms:** CDG1Z; DEE50; EIEE50; GATD4  
**Mammalian Cell Selection:** Neomycin  
**Vector:** pCMV6-AC-GFP (PS100010)  
**E. coli Selection:** Ampicillin (100 ug/mL)  
**ORF Nucleotide Sequence:** >RG209469 representing NM\_004341  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGATCGCC**

ATGGCGGCCCTAGTGTGGAGGACGGGTCGGTCTGCGGGCCAGCCCTTTGGGGCCGCGTGTGACTG  
 CCGGGGAAGTGGTGTTCAAACCGGCATGGTCGGCTACCCGAGGCCCTCACTGATCCCTCTACAAGGC  
 ACAGATCTTAGTGCTCACCTATCCTCTGATCGGCAACTATGGCATCCCCCAGATGAAATGGATGAGTTC  
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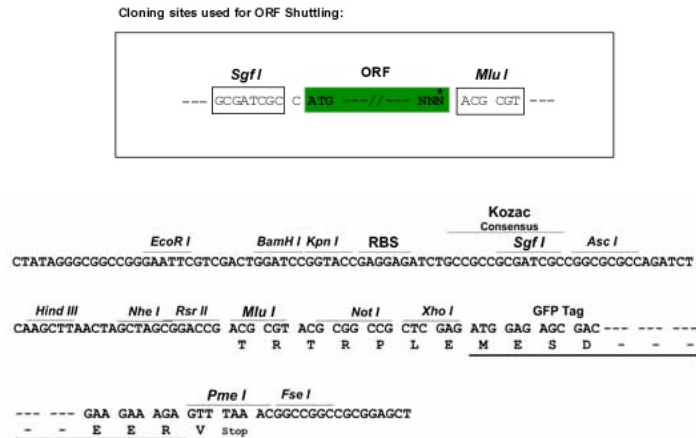
ACGCGTACGCGGGCCGCTCGAG - GFP Tag - GTTTAA

**Protein Sequence:** >RG209469 representing NM\_004341  
 Red=Cloning site Green=Tags(s)

MAALVLEDGSLRGQPFGAAVSTAGEVVFQTMVGYPEALTDPSYKAQILVLTYPYLIIGNYGIPPEMDEF  
 GLCKWFESSGIHVAALVGECCPTPSHWSATRTLHEWLQHGIPGLQGVDTRELTKKLREQSLLGKLVQ  
 NGTEPSSLPFLDPNARPLVPEVSIKTPRVFNTGGAPRILALDCGLKYNQIRCLCQRGAEVTVPWDHALD  
 SQEYEGFLFLSNGPGDPASYPVSVSTLSRVLSEPNRPVFGICLGHQLLALAIKAKTYKMRVGNRGNQPC  
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 DCFASDHAPHTLEEKCSRPPPGFPLETMLPLLLTAVSEGRLSLDQLLQRLHHPRIFFHLPQEDTYV  
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 KGKVMASMFYEVSTRSSFAAAMARLGGAVLSFSEATSSVQKGESLADSVQTMSCYADVVLVLRHPQPGA  
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 IMTRAKKKMVMHMPRVNEISVEVSDPRAAYFRQAENGMYIRMAALLATVLRGFR

TRTRPLE - GFP Tag - V

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**


**ACCN:** NM\_004341

**ORF Size:** 6675 bp

**OTI Disclaimer:** Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at [custsupport@origene.com](mailto:custsupport@origene.com) or by calling 301.340.3188 option 3 for pricing and delivery.

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.

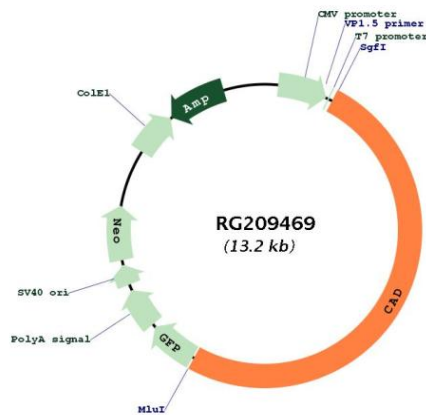
**Components:** The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

**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:	<a href="#">NM_004341.5</a>
RefSeq Size:	7108 bp
RefSeq ORF:	6678 bp
Locus ID:	790
UniProt ID:	<a href="#">P27708</a>
Cytogenetics:	2p23.3
Protein Families:	Druggable Genome
Protein Pathways:	Alanine, aspartate and glutamate metabolism, Metabolic pathways, Pyrimidine metabolism
Gene Summary:	The de novo synthesis of pyrimidine nucleotides is required for mammalian cells to proliferate. This gene encodes a trifunctional protein which is associated with the enzymatic activities of the first 3 enzymes in the 6-step pathway of pyrimidine biosynthesis: carbamoylphosphate synthetase (CPS II), aspartate transcarbamoylase, and dihydroorotase. This protein is regulated by the mitogen-activated protein kinase (MAPK) cascade, which indicates a direct link between activation of the MAPK cascade and de novo biosynthesis of pyrimidine nucleotides. Alternative splicing results in multiple transcript variants encoding different isoforms. [provided by RefSeq, Apr 2015]

### Product images:



Circular map for RG209469