

## Product datasheet for **SC303469**

### CAD (NM\_004341) Human Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	CAD (NM_004341) Human Untagged Clone
Tag:	Tag Free
Symbol:	CAD
Synonyms:	CDG1Z; DEE50; EIEE50; GATD4
Vector:	<u>pCMV6 series</u>
Fully Sequenced ORF:	>NCBI ORF sequence for NM_004341, the custom clone sequence may differ by one or more nucleotides

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GCAGCCTACTTCCGCCAGGCTGAGAACGGCATGTACATCCGCATGGCTCTGTTAGCCACC
GTGCTGGGCCGTTTCTAG
    
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- Restriction Sites:** Please inquire
- ACCN:** NM\_004341
- OTI Disclaimer:** Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
- OTI Annotation:** This TrueClone is provided through our Custom Cloning Process that includes sub-cloning into OriGene's pCMV6 vector and full sequencing to provide a non-variant match to the expected reference without frameshifts, and is delivered as lyophilized plasmid DNA.
- 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\\_004341.3](#), [NP\\_004332.2](#)

**RefSeq Size:** 7108 bp

**RefSeq ORF:** 6678 bp

**Locus ID:** 790

**UniProt ID:** [P27708](#)

**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]  
Transcript Variant: This variant (1) represents the longer transcript and encodes the longer isoform (1).