

## Product datasheet for **SC325216**

### CTPS2 (NM\_001144002) Human Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	CTPS2 (NM_001144002) Human Untagged Clone
Tag:	Tag Free
Symbol:	CTPS2
Synonyms:	GATD5B
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

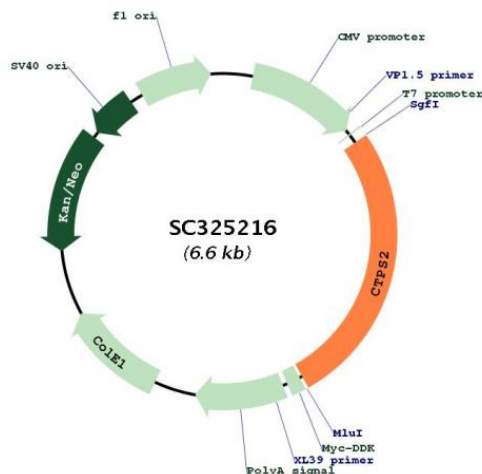


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Fully Sequenced ORF: >SC325216 representing NM\_001144002.  
Blue=Insert sequence Red=Cloning site Green=Tag(s)

```
GCTCGTTTAGTGAACCGTCAGAATTTTGTAAACGACTCACTATAGGGCGGCCGGGAATTCGTGACTG
GATCCGGTACCGAGGAGATCTGCCGCCCGCATCGCC
ATGAAGTACATCCTGGTACGGGTGGGTCATCTCAGGCATTGGTAAAGGGATCATTGCCAGCAGCATT
GGAACGATTCTAAAATCATGTGGACTCCGAGTTACTGCCATAAAAATCGACCCCTATATTAACATCGAT
GCTGGCACTTTTTCACCTTATGAACACGGTGAAGTCTTCGTCTTAAATGATGGTGGAGAAGTTGATTTA
GACCTTGAAATTATGAAAGATTTTGGATATTAATCTTTATAAAGACAACAATATCACACGGGGAAG
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CACATTACTGATGCTGTCCAGGAGTGGTTATGAATCAAGCCAAGGTGCCGGTGGATGGTAATAAGGAA
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CAGCTCAGTGCTACGGAGAACAAAAACCAACCCACCCAAAACAGCGTCCGCGCACTGAGGGGTTTA
GGCCTGTCTCCAGATCTGATTGTCTGCCGAAGTCAACGCCCATTGAGATGGCCGTGAAGGAGAAGATT
TCTATGTTTTGTACGTGAACCCCTGAACAGGTCATATGTATCCATGATGTTTCTCCACATACCGAGTT
CCTGTGCTTTTAGAGGAACAAAGCATTGTGAAATATTTAAGGAGAGATTGCACCTGCCATCGGTGAT
TCTGCAAGTAATTTGCTTTTAAAGTGGAGAAATATGGCTGACAGGTATGAAAGGTTACAGAAAATATGC
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GAGCACAAACCCTGGCAATTTGGGAGGAACAATGAGACTGGGAATAAGAAGAACTGTTTTCAAACCTGAA
AATTCAATATTAAGGAACTTTTGGTGTGTTCTTTTATAGAAGAAAGACACAGACATCGGTTGAG
GTA AACCTAACCTGATCAAACAATTTGAGCAGAATGACTTAAGTTTTGTAGGTCAGGATGTTGATGGA
GACAGGATGAAATCATTGAACTGGCAAATCATCCTATTTTGTGGTGTCCAGTCCATCCTGAGTTT
TCTTCTAGGCCGATGAAGCCTTCCCTCCGATCTGGGGCTGTTACTTGCAGCAACTGGGAACCTGAAT
GCCTACTTGCAACAGGGTTGCAAACGTCTTCCAGTGATAGATACAGTGATGCCAGTGATGACAGCTTT
TCAGAGCCAAGGATAGCTGAGTTGAAATAAGCTGA
ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGAT
TACAAGGATGACGACGATAAGGTTTAAACGGCCGGC
```

Restriction Sites: SgfI-MluI

**Plasmid Map:**


**ACCN:** NM\_001144002

**Insert Size:** 1761 bp

**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\\_001144002.1](#)

**RefSeq Size:** 4334 bp

**RefSeq ORF:** 1761 bp

**Locus ID:** 56474

**UniProt ID:** [Q9NRF8](#)

**Cytogenetics:** Xp22.2

**Protein Pathways:** Metabolic pathways, Pyrimidine metabolism

**MW:** 65.7 kDa

**Gene Summary:** The protein encoded by this gene catalyzes the formation of CTP from UTP with the concomitant deamination of glutamine to glutamate. This protein is the rate-limiting enzyme in the synthesis of cytosine nucleotides, which play an important role in various metabolic processes and provide the precursors necessary for the synthesis of RNA and DNA. Cancer cells that exhibit increased cell proliferation also exhibit an increased activity of this encoded protein. Thus, this protein is an attractive target for selective chemotherapy. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Aug 2013]  
Transcript Variant: This variant (3) represents the longest transcript. Variants 1, 2 and 3 encode the same protein.