

Product datasheet for **RG217377**

Cyclin T1 (CCNT1) (NM_001240) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Cyclin T1 (CCNT1) (NM_001240) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	CCNT1
Synonyms:	CCNT; CYCT1; HIVE1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>RG217377 ORF sequence, **codon optimized**.
 Due to the complexity of NM_001240, the ORF clone is codon optimized for mammalian Expression.
 The nucleotide sequence differs from the reference sequence, yet the amino acid sequence remains identical.

Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTGCGACTGGATCCGGTACCGAGGAGATCTGCCGCC**GCGATCGCC**

ATGGAGGGAGAGAGGAAGAACAACAACAAACGGTGGTATTTCACTCGAGAACAGCTGGAAAATAGCCCATCCCCTCGTTTTGGCGTGGACCCAGATAAAGAACTTTCTTATCGCCAGCAGGCGCCAATCTGCTTCAGGACATGGGGCAGCGTCTAACGTCTCACAAATTGACTATCAACTGCTATAGTATACATGCATCGATTCTACATGATTACAGTCTTACACAGTTCCTGAAAATTCTGTGGCTCCAGCAGCCTGTTTCTAGCAGCTAAAGTGGAGGAGCAGCCAAAAAATTGGAACATGTCAAGGTAGCACATACTGTCTCCATCCTCAGGAATCCCTTCTGATACTAGAAGTGAGGCTTATTTGCAACAAGTTCAAGATCTGGTCATTTTAGAAAGCATAATTGCGAGACTTTAGGCTTTGAACTAACAATTGATCACCCACATACTCATGTAGTAAAGTCACTCAACTTGTTCGAGCAAGCAAGGACTTAGCACAGACTTCTTACTTCATGGCAACCAACAGCCTGCATTTGACCACATTAGCCTGCAGTACACACCTCCTGTGGTGGCCTGTGTCTGCATTACCTGGCTTCAAGTGGTCCAATTGGGAGATCCCAGTCTCAACTGACGGGAAGCACTGGTGGGAGTATGTTGACGCCACTGTGACCTTGGAACTTTAGATGAACTGACACATGAGTTTCTACAGATTTGGAGAAAACCCCAACAGGCTCAAACGCATTTGGAAATGGAGGGCATGCGAGGCTGCCAAGAAAACAAGCAGATGACCGAGGAACAGATGAAAAGACTTCAGACAGACAATCCTCAATATGATTTCCAGAGCTTTCAGACACAACCATTCAGGTTTAATGAGCATGTCAACTTCTACCACAAGTGCAAGTGCCTTCCCTGCCAGTCTCCGAAGAGTCATCCAGCAACTTAACCAGTGTGGAGATGTTGCCGGCAAGCGTTGGCTGTCTCCCAACCTTCTTCAAAGTAACTACTCAGGGTCACTCGACTAGTGAGAATTTAGCACTTACAGGAGTTGATCATTCTTACCCCAAGACGGCAGCAATGCGTTCAATCCCAAAAGCAAAATAGTAAATCCGTGCCAGCGCCAAGGTGAGCCTCAAAGAATATAGGGCGAAGCATGAGAGGAGCTCGCCGCCAGAACGCCAATTGGAGAATATGGAGGTAACGTGAAATCTCAATACGCTTACGCCGACAGAACCTGCTGAGCCATCATGACAGCCACTCAAGCGTCATCCTGAAAAAGCCATAGAGGGCATGAAAACCTGAGAGGCCGTTCTGAAAAAGCTGATAAACAGCTCTTAAATGAGGATCCCAGTGGCAGGGGGCACAAGGCTGCCTCAAGTAAACCGGAAGAAATTAATGAGAATAAAAGTTTCATGCTGCCGCCGATAAGCATAACTCTGTGGAGGATTCCGTGACTAAAAGTGGGAGCACAAGGAAAAACAAAACTCATCATCAAATCATCACCACCACCACAACCACCATTCCCATAGCACTCCCACTCCCAGCTCCCAGTGGGAACGGGAATAAACGCCCGGTGACCCCAAGCACTCTAGTCAGACCAGCAACTGGCTCATAAAACGTATTCACTGAGCAGCTCCTTCTTTCATCATCCAGCACCCGAAAGCGGGGCCCTCCGAAGAGACAGGCGGGGCGGTGTTTGATCATCCAGCAAAAATCGCCAAATCTACCAAAAGCTCTCCCTTAATTTCTCATTTCCTAGTCTGCCACAATGGCCAGATGCCTGGACATTCATCCGATACATCTGGCTTGTCTTTAGCCAGCCATCCTGAAAAGTGGGTGCCTCACTCCTCAAACTGGACAAAGGGCCACCGGGCTAATGGCCACAACAACACTCAGACAATTGACTACCGATACCGTTAATATGCTGCATTCACTGCTCAGCGCCAAGGTGTCCAGCCTACGCAACCTACAGCTTTGAGTTTGTGCGCCCTACTCCGACTACCTTAATCCACGGAGCGGTGGCATCAGCTCCCGATCTGGTAATACGGATAAGCCCGGCCCCCTCTGCCATCAGAGCCACCCCCCACTGCCACCAC TGCCAAA

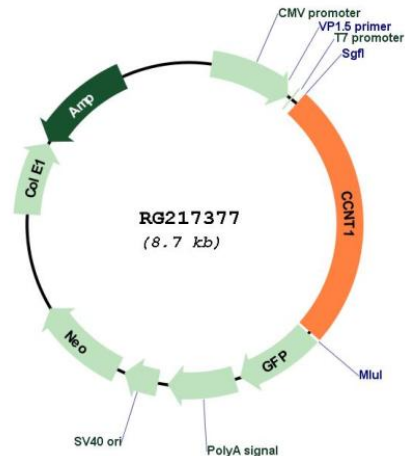
ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence: >RG217377 representing NM_001240
Red=Cloning site Green=Tags(s)

MEGERKNNKRWYFTREQLSPSRRFGVDPDKELSYRQQAANLLQDMGQRLNVSQLTINTAIVYMHRFY
MIQSFTQFPGNSVAPAALFLAAKVEEQPKKLEHVIKVAHTCLHPQESLPDTRSEAYLQQVQDLVILESII
LQTLGFELTIDHPHTHVVKCTQLVRASKDLAQTSYFMATNSLHLTTFSLQYTPPVVACVCIHLACKWSNW
EIPVSTDGKHWWEYVDATVTLELLDELTHEFLQILEKTPNRLKRIWNWRACEAAKTKADDRGTDEKTSE
QTILNMQSSDSTTIAGLMSMSTSTSAVPSLPVSEESSNLTSVEMLPGKRWLSSQPSFKLEPTQGHR
TSENALTGVDHSLPQDGSNAFISQKQNSKSVPSAKVSLKEYRAKHAEELAAQKRQLENMEANVKSQYAY
AAQNLLSHHDSHSSVILKMPIEGSENPERPFLEKADKTALKMRIPVAGGDKAASSKPEEIKMRIKVHAAA
DKHNSVEDSVTKSREHKEKHKTHPSNHHHHHHHSHKSHSSQLPVGTKNKRPGDPKHSSQTSNLAKHTYS
LSSSFSSSSSTRKRGPSSEETGGAVFDHPAKIAKSTKSSSLNFSFPLPTMGQMPGHSSDTSGLSFSQPSC
KTRVPHSKLDKGPTGANGHNTTQTIDYQDTVNMLHSLLSAQGVQPTQPTAFEFVRPYSDYLNPRSGGISS
RSGNTDKPRPPPLPSEPPPPPLPLPK

TRTRPLE - GFP Tag - V

Restriction Sites: Sgfl-Mlul

Plasmid Map:


ACCN: NM_001240

ORF Size: 2178 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_001240.3](#), [NP_001231.2](#)

RefSeq Size: 6788 bp

RefSeq ORF: 2181 bp

Locus ID: 904

UniProt ID: [O60563](#)

Cytogenetics: 12q13.11-q13.12

Protein Families: Druggable Genome, Transcription Factors

Gene Summary: This gene encodes a member of the highly conserved cyclin C subfamily. The encoded protein tightly associates with cyclin-dependent kinase 9, and is a major subunit of positive transcription elongation factor b (p-TEFb). In humans, there are multiple forms of positive transcription elongation factor b, which may include one of several different cyclins along with cyclin-dependent kinase 9. The complex containing the encoded cyclin and cyclin-dependent kinase 9 acts as a cofactor of human immunodeficiency virus type 1 (HIV-1) Tat protein, and is both necessary and sufficient for full activation of viral transcription. This cyclin and its kinase partner are also involved in triggering transcript elongation through phosphorylation of the carboxy-terminal domain of the largest RNA polymerase II subunit. Overexpression of this gene is implicated in tumor growth. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Apr 2013]