

## Product datasheet for **RC217377**

### 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:	Myc-DDK
Symbol:	Cyclin T1
Synonyms:	CCNT; CYCT1; HIVE1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide Sequence:**

>RC217377 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)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTGCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGATCGC**C

ATGGAGGGAGAGAGGAAGAACAACAACAAACGGTGGTATTTCACTCGAGAACAGCTGGAAAATAGCCCAT  
 CCCGTCGTTTTGGCGTGGACCCAGATAAAGAACTTTCTTATCGCCAGCAGGCGCCAATCTGCTTCAGGA  
 CATGGGGCAGCGTCTAACGTCTCACAAATTGACTATCAACTGCTATAGTATACATGCATCGATTCTAC  
 ATGATTCAGTCCCTCACACAGTTCCTGGAAATCTGTGGCTCCAGCAGCCTGTTTCTAGCAGCTAAAG  
 TGGAGGAGCAGCCAAAAAATTGGAACATGTCAAGGTAGCACATACTGTCTCCATCCTCAGGAATC  
 CCTTCTGATACTAGAAGTGAGGCTTATTTGCAACAAGTTCAAGATCTGGTCATTTTAGAAAGCATAATT  
 TTGCGACTTTAGGCTTTGAACTAACAATTGATCACCCACATACTCATGTAGTAAAGTCACTCAACTTG  
 TTCGAGCAAGCAAGGACTTAGCACAGACTTCTTACTTCATGGCAACCAACAGCCTGCATTTGACCACATT  
 TAGCCTGCAGTACACACCTCCTGTGGTGGCCTGTGTCTGCATTACCTGGCTTCAAGTGGTCCAATTGG  
 GAGATCCCAGTCTCAACTGACGGGAAGCACTGGTGGGAGTATGTTGACGCCACTGTGACCTTGGAACTTT  
 TAGATGAACTGACACATGAGTTTCTACAGATTTTGGAGAAAACCCCAACAGGCTCAAACGCATTTGGAA  
 TTGGAGGGCATGCGAGGCTGCCAAGAAAACAAGCAGATGACCGAGGAACAGATGAAAAGACTTCAGAG  
 CAGACAATCCTCAATATGATTTCCAGAGCTTTCAGACACAACCAATTGCAGGTTAATGAGCATGTCAA  
 CTTCTACCACAAGTGCAGTGCCTTCCCTGCCAGTCTCCGAAGAGTCATCCAGCACTTAACCAGTGTGGA  
 GATGTTGCCGGCAAGCGTTGGCTGTCTCCCAACCTTCTTCAAAGTAACTACTCAGGGTCACTCGG  
 ACTAGTGAGAATTTAGCACTTACAGGAGTTGATCATTCTTACCCCAAGACGGCAGCAATGCGTTCAATT  
 CCCAAAAGCAAAATAGTAAATCCGTGCCAGCGCCAAGGTGAGCCTCAAAGAATATAGGGCGAAGCATGC  
 AGAGGAGCTCGCCGCCAGAACGCCAATTGGAGAATATGGAGGTAACGTGAAATCTCAATACGCTTAC  
 GCCGCACAGAACCTGCTGAGCCATCATGACAGCCACTCAAGCGTCATCCTGAAAAAGCCATAGAGGGCA  
 GTGAAAACCTGAGAGGCGTTCCTGAAAAAGCTGATAAAACAGCTCTTAAATGAGGATCCCAGTGGC  
 AGGGGGCAGAACGCTGCCTCAAGTAAACCGGAAGAAATTAATAATGAGAATAAAAAGTTTCATGCTGCCGC  
 GATAAGCATAACTCTGTGGAGGATTCCGTGACTAAAAGTAGGGAGCACAAGGAAAAACAAAACTCATC  
 CATCAATCATCACCACCACCACAACCACCATTCCCATAGCACTCCCACTCCCAGCTCCCAGTGGGAAC  
 GGGGAATAAACGCCCGGTGACCCCAAGCACTCTAGTCAGACCAGCAACTGGCTCATAAAACGTATTCA  
 CTGAGCAGCTCCTTCTTTCATCATCCAGCACCCGAAAGCGGGGCCCTCCGAAGAGACAGGCGGGGCGG  
 TGTTTGATCATCCAGCAAAAATCGCCAAATCTACCAAAAGCTCTCCCTTAATTTCTCATTTCCTAGTCT  
 GCCACAATGGGCCAGATGCCTGGACATTCATCCGATACATCTGGCTTGTCTTTAGCCAGCCATCCTGT  
 AAAACTAGGGTGCCTCACTCAAACCTGGACAAAGGGCCACCGGGGCTAATGGCCACAACAACACTCAGA  
 CAATTGACTACCAGGATACCGTTAATATGCTGCATTCACTGCTCAGCGCCCAAGGTGTCCAGCCTACGCA  
 GCCTACAGCTTTGAGTTTGTGCGCCCTACTCCGACTACCTTAATCCACGGAGCGGTGGCATCAGCTCC  
 CGATCTGGTAATACGGATAAGCCCCGGCCCCCTCTGCCATCAGAGCCACCCCCCACTGCCACCAC  
 TGCCAAA

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:** >RC217377 representing NM\_001240  
 Red=Cloning site Green=Tags(s)

MEGERKNNKRWYFTREQLNSPSSRRFGVDPDKELSYRQQAANLLQDMGQRLNVSQLTINTAIVYMHRFY  
 MIQSFTQFPGNSVAPAALFLAAKVEEQPKLEHVIKVAHTCLHPQESLPDTRSEAYLQQVQDLVILESII  
 LQTLGFELTIDHPHTHVVKCTQLVRASKDLAQTSYFMATNSLHLTTFSLQYTPPVVACVCIHLACKWSNW  
 EIPVSTDGKHWWEYVDATVTLELLDELTHEFLQILEKTPNRLKRIWNWRACEAAKTKADDRGTDEKTSE  
 QTILNMIQSSSDTTIAGLMSMSTSTSAVPSLPVSEESSNLTSVEMLPGKRWLSSQPSFKLEPTQGHR  
 TSENALALTGVDHSLPQDGSNAFISQKQNSKSVPSAKVSLKEYRAKHAEEELAAQKRLENMEANVKSQYAY  
 AAQNLLSHHDSHSSVILKMPIEGSENPERPFLEKADKTKMRIPVAGDKAASSKPEEIKMRIKVHAAA  
 DKHNSVEDSVTKSREHKEKHKTHPSNHHHHHHHSHKHSLSQLPVGTKNRPKDPKHSSQTSNLAHKTYS  
 LSSSFSSSSTRKGPSEETGGAVFDHPAKIAKSTKSSSLNFSFPLPTMGQMPGHSSDTSGLSFSQPSC  
 KTRVPHSKLDKGPTGANGHNTTQTIDYQDTVNMLHSLLSAQGVQPTQPTAFEFVRPYSYDLNPRSGGISS  
 RSGNTDKPRPPPLPSEPPPLPLPK

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Restriction Sites:**

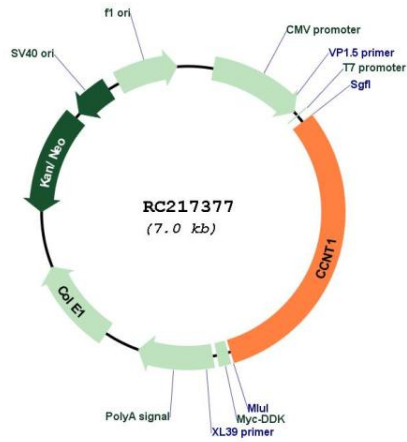
Sgfl-MluI

**Cloning Scheme:**



<b>ACCN:</b>	NM_001240
<b>ORF Size:</b>	2178 bp
<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_001240.1</a> , <a href="#">NM_001240.2</a> , <a href="#">NM_001240.3</a> , <a href="#">NP_001231.2</a>
<b>RefSeq Size:</b>	6788 bp
<b>RefSeq ORF:</b>	2181 bp
<b>Locus ID:</b>	904
<b>UniProt ID:</b>	<a href="#">O60563</a>
<b>Cytogenetics:</b>	12q13.11-q13.12
<b>Protein Families:</b>	Druggable Genome, Transcription Factors
<b>MW:</b>	80.7 kDa
<b>Gene Summary:</b>	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]

Product images:



Circular map for RC217377