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| <b>5' Read Nucleotide Sequence:</b> | <p>&gt;OriGene 5' read for NM_053056 unedited<br/>           GTTCACATTTTGTATACGACTCACTATAGGCGGCCGGAATCGGCACGAGGCGCAGTAGC<br/>           AGCGAGCAGCAGAGTCCGCACGCTCCGGCGAGGGGCAGAAGAGCGCGAGGGAGCGCGGGG<br/>           CAGCAGAAGCGAGAGCCGAGCGCGGACCCAGCCAGGACCCACAGCCCTCCCAGCTGCC<br/>           AGGAAGAGCCCCAGCCATGGAACACCAGCTCCTGTGCTGCGAAGTGGAAACCATCCGCCG<br/>           CGCGTACCCCGATGCCAACCTCCTCAACGACCGGGTCTGCGGGCCATGCTGAAGCGGA<br/>           GGAGACCTGCGCGCCCTCGGTGCCTACTTCAAATGTGTGCGAGAAGGAGGTCTCGCGTC<br/>           CATGCGGAAGATCGTCGCCACCTGGATGCTGGAGGTCTGCGAGGAACAGAAGTCCGAGGA<br/>           GGAGGTCTTCCCCTGGCCATGAACTACCTGGACCGCTTCTGTGCTGGAGCCCGTGAA<br/>           AAAGAGCCGCTGCAGCTGCTGGGGCCACTTGCATGTTTCGTGGCCTCTAAGATGAAGGA<br/>           GACCATCCCCCTGACGGCCGAGAAGCTGTGCATCTACACCGACAACCTCCATCCGGCCCGA<br/>           GGAGCTGTGCAAATGGAGCTGCTCCTGGTGAACAAGCTCAAGTGGAACTGCCCGCAAT<br/>           GACCCCGCAGATTTTATTGAACACTTCTCTCCAAAAGCCAGAAGCGGAGGAGAACANA<br/>           CAGATCATCCGAAACACGCGCAGACCCTTCGTGCCCTCTGTGCACAGATGTGAAGTTCA<br/>           TTTCCATCCGCCCTCCATGTTGCANCGGCGAGCGTGGTGGCCGACTGCAAGCCTGAACT<br/>           TGAGAAGCCCAACAACCTTCTGTCTACTACGGCCTAAAACGTTTCTCTCCAGAGTGATCA<br/>           AGGGGGACCCAACTGCCTTC</p>                                                           |
| <b>3' Read Nucleotide Sequence:</b> | <p>&gt;OriGene 3' read for NM_053056 unedited<br/>           CCGCGGGCCGCAATCTAGAGTCGAGTTTTTTTTTTTTTTTTTTTTTACATAGCCAAGATGTG<br/>           CAAATTGTCTATTTTGTCACTAAGTTTTTTAAAGGAAGGGGCAGGGGATAAGAATTCATC<br/>           GGAACCGAACTTAGTTGAGTACCCTAATTTTCTTGCACCCATGCCTGTCCAATCAGAT<br/>           GACTCTGGGAAACGCCAAACAGGCTGAATCAATGTCTTTGTGTGGTTTTTTTCTTCCAGA<br/>           TTGTTTTTTTCTACCTATAAAAGGATCTATCTTTAAAAATAAACTGTATTAAATCTGTA<br/>           ACATCAAAGGCAGAAGGTTTGTGTGTGTGTGTGTGTGTGTGTGTATCTGTGTGTTTAA<br/>           ATCAAGGGGAGATTGCATTTATAAATCATACTGGCCTTATGAACATCCTCTGCAATAAAT<br/>           ATACTTTTTAGCCTTAACTATAAATTATATTTTTAGTGTTTAAAAACCTTCCGGTGTGA<br/>           AACATCTAAGATAACCCTTAAAAACACCTGTTCTCTAGGTAAACCTCTGAGGTCCTAC<br/>           TTTCAAACACCAGTTGGCACCAAAGGATTCCTAAACTTCAACTCTTTAAAGAAAAGGAA<br/>           AGGAACCTATCATCCTGGCAATGTGAGAATGCAAACCTTTTTCTTCTTACTGGCAGCGCA<br/>           GCCTCCCAACACCCACCTTCACTGCCACACAGTGGCCACACTTGCCTCAAAGTCTGC<br/>           TTGCAAAACAGACATGGATATTCCAACCTTTCCATTAATAAACTGCCCTCCTTGCACACC<br/>           AACAAAAACAGCGTTATTTCTCCACCTATTGTACTGAAATGCCTTGAATGGAATGGTT<br/>           TTATATTTGAACAAGAACCACAACAGTTCCTGTGGGTTAACCTGACACTAACCTGCTG<br/>           CAGGGCCCTTGGTATAAAACCACTTTTTTAAAGGTGTCTTCANAATTGGAAGTAAAA<br/>           ATAT</p> |
| <b>Restriction Sites:</b>           | NotI-NotI                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>ACCN:</b>                        | NM_053056                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Insert Size:</b>                 | 888 bp                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>OTI Disclaimer:</b>              | 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).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <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).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

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| <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>Note:</b>                  | Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>RefSeq:</b>                | <a href="#">NM_053056.1</a> , <a href="#">NP_444284.1</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>RefSeq Size:</b>           | 4306 bp                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>RefSeq ORF:</b>            | 888 bp                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Locus ID:</b>              | 595                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>UniProt ID:</b>            | <a href="#">P24385</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Cytogenetics:</b>          | 11q13.3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Domains:</b>               | cyclin_C, CYCLIN, cyclin                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Protein Families:</b>      | Druggable Genome, Stem cell - Pluripotency, Stem cell relevant signaling - DSL/Notch pathway, Stem cell relevant signaling - JAK/STAT signaling pathway, Stem cell relevant signaling - Wnt Signaling pathway                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Protein Pathways:</b>      | Acute myeloid leukemia, Bladder cancer, Cell cycle, Chronic myeloid leukemia, Colorectal cancer, Endometrial cancer, Focal adhesion, Glioma, Jak-STAT signaling pathway, Melanoma, Non-small cell lung cancer, p53 signaling pathway, Pancreatic cancer, Pathways in cancer, Prostate cancer, Small cell lung cancer, Thyroid cancer, Viral myocarditis, Wnt signaling pathway                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Gene Summary:</b>          | The protein encoded by this gene belongs to the highly conserved cyclin family, whose members are characterized by a dramatic periodicity in protein abundance throughout the cell cycle. Cyclins function as regulators of CDK kinases. Different cyclins exhibit distinct expression and degradation patterns which contribute to the temporal coordination of each mitotic event. This cyclin forms a complex with and functions as a regulatory subunit of CDK4 or CDK6, whose activity is required for cell cycle G1/S transition. This protein has been shown to interact with tumor suppressor protein Rb and the expression of this gene is regulated positively by Rb. Mutations, amplification and overexpression of this gene, which alters cell cycle progression, are observed frequently in a variety of human cancers. [provided by RefSeq, Dec 2019] |