Construct information sheet

Gene name	**VCP**
Uniprot ID	P55072
Region	M1 - G806

Description	Valosin containing protein, Transitional endoplasmic reticulum ATPase
Synonyms	CDC48, TERA, p97
Construct ID	VCPA-c000
Protein sequence	*MHHHHHHSSGVDLGTENLYFQ*SM*ASGADSKGDDLSTAILKQKNR PNRLIVDEAINEDNSVVSLSQPKMDELQLFRGDTVLLKGKKRREA VCIVLSDDTCSDEKIRMNRVVRNNLRVRLGDVISIQPCPDVKYGK RIHVLPIDDTVEGITGNLFEVYLKPYFLEAYRPIRKGDIFLVRGG MRAVEFKVVETDPSPYCIVAPDTVIHCEGEPIKREDEEESLNEVG YDDIGGCRKQLAQIKEMVELPLRHPALFKAIGVKPPRGILLYGPP GTGKTLIARAVANETGAFFFLINGPEIMSKLAGESESNLRKAFEE AEKNAPAIIFIDELDAIAPKREKTHGEVERRIVSQLLTLMDGLKQ RAHVIVMAATNRPNSIDPALRRFGRFDREVDIGIPDATGRLEILQ IHTKNMKLADDVDLEQVANETHGHVGADLAALCSEAALQAIRKKM DLIDLEDETIDAEVMNSLAVTMDDFRWALSQSNPSALRETVVEVP QVTWEDIGGLEDVKRELQELVQYPVEHPDKFLKFGMTPSKGVLFY GPPGCGKTLLAKAIANECQANFISIKGPELLTMWFGESEANVREI FDKARQAAPCVLFFDELDSIAKARGGNIGDGGGAADRVINQILTE MDGMSTKKNVFIIGATNRPDIIDPAILRPGRLDQLIYIPLPDEKS RVAILKANLRKSPVAKDVDLEFLAKMTNGFSGADLTEICQRACKL AIRESIESEIRRERERQTNPSAMEVEEDDPVPEIRRDHFEEAMRF ARRSVSDNDIRKYEMFAQTLQQSRGFGSFRFPSGNQGGAGPSQGS GGGTGGSVYTEDNDDDLYGS*SKGGYGLNDIFEAQ**K**IEWHE*
DNA sequence (coding sequence)	ATGCACCATCATCATCATCATTCTTCTGGTGTAGATCTGGGTACCGAGAA CCTGTACTTCCAATCCATGGCTTCTGGAGCCGATTCAAAAGGTGATGACC TATCAACAGCCATTCTCAAACAGAAGAACCGTCCCAATCGGTTAATTGTT GATGAAGCCATCAATGAGGACAACAGTGTGGTGTCCTTGTCCCAGCCCAA GATGGATGAATTGCAGTTGTTCCGAGGTGACACAGTGTTGCTGAAAGGAA AGAAGAGACGAGAAGCTGTTTGCATCGTCCTTTCTGATGATACTTGTTCT GATGAGAAGATTCGGATGAATAGAGTTGTTCGGAATAACCTTCGTGTACG CCTAGGGGATGTCATCAGCATCCAGCCATGCCCTGATGTGAAGTACGGCA AACGTATCCATGTGCTGCCCATTGATGACACAGTGGAAGGCATTACTGGT AATCTCTTCGAGGTATACCTTAAGCCGTACTTCCTGGAAGCGTATCGACC CATCCGGAAAGGAGACATTTTTCTTGTCCGTGGTGGGATGCGTGCTGTGG AGTTCAAAGTGGTGGAAACAGATCCTAGCCCTTATTGCATTGTTGCTCCA GACACAGTGATCCACTGCGAAGGGGAGCCTATCAAACGAGAGGATGAGGA AGAGTCCTTGAATGAAGTAGGGTATGATGACATTGGTGGCTGCAGGAAGC AGCTAGCTCAGATAAAGGAGATGGTGGAACTGCCCCTGAGACATCCTGCC CTCTTTAAGGCAATTGGTGTGAAGCCTCCTAGAGGAATCCTGCTTTACGG ACCTCCTGGAACAGGAAAGACCCTGATTGCTCGAGCTGTAGCAAATGAGA CTGGAGCCTTCTTCTTCTTGATCAATGGTCCTGAGATCATGAGCAAATTG GCTGGTGAGTCTGAGAGCAACCTTCGTAAAGCCTTTGAGGAGGCTGAGAA GAATGCTCCTGCCATCATCTTCATTGATGAGCTAGATGCCATCGCTCCCA AAAGAGAGAAAACTCATGGCGAGGTGGAGCGGCGCATTGTATCACAGTTG TTGACCCTCATGGATGGCCTAAAGCAGAGGGCACATGTGATTGTTATGGC AGCAACCAACAGACCCAACAGCATTGACCCAGCTCTACGGCGATTTGGTC GCTTTGACAGGGAGGTAGATATTGGAATTCCTGATGCTACAGGACGCTTA GAGATTCTTCAGATCCATACCAAGAACATGAAGCTGGCAGATGATGTGGA CCTGGAACAGGTAGCCAATGAGACTCACGGGCATGTGGGTGCTGACTTAG CAGCCCTGTGCTCAGAGGCTGCTCTGCAAGCCATCCGCAAGAAGATGGAT CTCATTGACCTAGAGGATGAGACCATTGATGCCGAGGTCATGAACTCTCT AGCAGTTACTATGGATGACTTCCGGTGGGCCTTGAGCCAGAGTAACCCAT CAGCACTGCGGGAAACCGTGGTAGAGGTGCCACAGGTAACCTGGGAAGAC ATCGGGGGCCTAGAGGATGTCAAACGTGAGCTACAGGAGCTGGTCCAGTA

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	TCCTGTGGAGCACCCAGACAAATTCCTGAAGTTTGGCATGACACCTTCCA AGGGAGTTCTGTTCTATGGACCTCCTGGCTGTGGGAAAACTTTGTTGGCC AAAGCCATTGCTAATGAATGCCAGGCCAACTTCATCTCCATCAAGGGTCC TGAGCTGCTCACCATGTGGTTTGGGGAGTCTGAGGCCAATGTCAGAGAAA TCTTTGACAAGGCCCGCCAAGCTGCCCCCTGTGTGCTATTCTTTGATGAG CTGGATTCGATTGCCAAGGCTCGTGGAGGTAACATTGGAGATGGTGGTGG GGCTGCTGACCGAGTCATCAACCAGATCCTGACAGAAATGGATGGCATGT CCACAAAAAAAAAATGTGTTCATCATTGGCGCTACCAACCGGCCTGACATC ATTGATCCTGCCATCCTCAGACCTGGCCGTCTTGATCAGCTCATCTACAT CCCACTTCCTGATGAGAAGTCCCGTGTTGCCATCCTCAAGGCTAACCTGC GCAAGTCCCCAGTTGCCAAGGATGTGGACTTGGAGTTCCTGGCTAAAATG ACTAATGGCTTCTCTGGAGCTGACCTGACAGAGATTTGCCAGCGTGCTTG CAAGCTGGCCATCCGTGAATCCATCGAGAGTGAGATTAGGCGAGAACGAG AGAGGCAGACAAACCCATCAGCCATGGAGGTAGAAGAGGATGATCCAGTG CCTGAGATCCGTCGAGATCACTTTGAAGAAGCCATGCGCTTTGCGCGCCG TTCTGTCAGTGACAATGACATTCGGAAGTATGAGATGTTTGCCCAGACCC TTCAGCAGAGTCGGGGCTTTGGCAGCTTCAGATTCCCTTCAGGGAACCAG GGTGGAGCTGGCCCCAGTCAGGGCAGTGGAGGCGGCACAGGTGGCAGTGT ATACACAGAAGACAATGATGATGACCTGTATGGCAGCAGTAAAGGTGGAT ACGGCCTGAATGATATCTTTGAAGCGCAGAAGATTGAATGGCATGAATGA
Construct accession No.	

Vector information:

pNIC-Bio3	
Antibiotic resistance	Kanamycin, 50 μg/ml
Promoter	T7 - lacO
N-terminal fusion – seq.	MHHHHHHSSGVDLGTENLYFQ*SM (* - TEV cleavage site)
N-terminal fusion – MW	2684.1 Da including Met (2465.8 Da removed by TEV cleavage)
C-terminal fusion – seq.	GSKGGYGLNDIFEAQ**K***IEWHE (* biotinylation site)
C-terminal fusion - MW	2396.57 Da, +226 Da for biotinylation
Protease cleavage	TEV protease
Preferred expression host	DE3 hosts: BL21, Rosetta, etc. MUST express T7 RNA polymerase. For effective biotinylation, the host should overexpress BirA (e.g. from plasmid pCDF-BIRA, GenBank: JF914075)
Genebank: JN792439	Reference: PMID: 22027370

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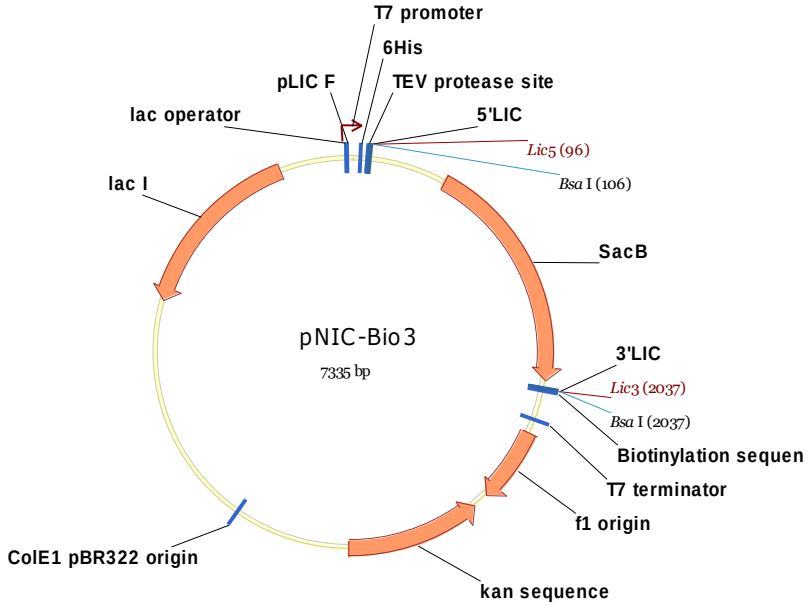

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