

Product datasheet for **MC202620**

Vcp (NM_009503) Mouse Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Vcp (NM_009503) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Vcp
Synonyms:	3110001E05; CDC48; p97; p97/VCP
Mammalian Cell Selection:	Neomycin
Vector:	PCMV6-Kan/Neo (PCMV6KN)
E. coli Selection:	Kanamycin (25 ug/mL)



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Fully Sequenced ORF: >BC049114 sequence for NM_009503
 TGATTCGGCTTTTCTCGGTTTCAGTCTCCGTGAAGCGTTTGCAGCCGTCGTTTGATTAGTCGCTGCCCCC
 TCGCGGATTAGGAGCTAGCGTCTCCCGCCCGCCGCTGCCGCCCGGTGCCCTGGGAGGAAGCGAGAG
 GGAGGCTGCCAGAGGTTTGTACTGCTGTTGCTCCTCCGCTCAGCGAGTCCAGCCCCGGCCTAGTCGG
 TCGCTGCCTTTCTCATAGCCGTTACCTCAGGCCGCCACAGCCGCCACCGGGAGAGCGCGGCCATG
 GCCTCTGGAGCCGATTCAAAAGGTGATGATTTATCAACAGCCATTCTCAAACAGAAGAACCAGCCAATC
 GGTTAATTGTTGATGAAGCCATCAATGAAGATAACAGCGTGGTGTCTTTGCCAGCCCAAGATGGATGA
 ACTGCAGTTGTTCCGAGGTGACACGGTGTGCTAAAAGGAAAGAAAAGACGGGAAGCTGTATGCATTGTT
 CTTTCTGATGACACGTGTTCTGATGAGAAGATTGAAATGAATAGAGTTGTTCCGGAATAACCTCCGAGTTC
 GCCTAGGAGATGTCATCAGCATCCAGCCATGCCCTGATGTAAGTATGGCAAACGTATCCACGTTTACC
 CATCGATGACACAGTGAAGGCATCACTGGCAATCTTTGAGGTATACCTTAAGCCGACTTCTCGGAA
 GCTTATCGGCCCATCCGTAAGGAGATATTTTTCTTGTCCGGGTGGGATGCGTGTGTGGAGTTCAAAG
 TTGTAGAGACAGATCCCAGCCCTACTGTATTGTTGCTCCAGACACAGTATCCACTGTGAGGGGAGCC
 AATCAAGCGAGAGGATGAGGAGGAATCCTTGAATGAAGTAGGCTATGATGACATCGGTGTTGCAGGAAG
 CAGCTAGCTCAGATAAAGGAGATGGTGGAGCTGCCACTGAGACATCCTGCCTCTTAAGCCGATTGGTG
 TAAAGCCTCCTCGGGAAATCTTGTGTATGGGCCCTCCTGGACAGGGAAGACCCTGATTGCTCGAGCTGT
 GGCAAATGAAACTGGAGCCTTCTTTCTGATCAATGGTCTGAAATCATGAGCAAATGGCTGGTGGAG
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 AGCTTGATGCCATTGCACCCAAAAGAGAGAAAACCTCATGGGGAAGTGGAGCGTCGCATCGTGTCTCAGTT
 GTTGACCTCATGGATGGCTAAAGCAGAGAGCACATGTGATAGTTATGGCAGCAACCAATAGACCCAAC
 AGCATTGACCCAGCCCTACGGCGATTTGGTCGCTTTGACAGAGAGGTAGATATTGGAATACCTGATGCTA
 CAGGACGTTTGGAGATTCTCAGATCCATACCAAGAACATGAACTGGCAGATGATGTGGACTTGGAAACA
 GGATCCCAATGAGACTCATGGTCAATGTTGGTGTGATTTGGCAGCCCTATGTTCCAGAGGCTGCTGTCAG
 GCCATCCGAAAAAATGGACCTCATTGACCTAGAAGATGAGACCATTGATGCTGAGGTCATGAATTCCT
 TGGCAGTTACTATGGATGACTTCCGGTGGGCTTTGAGTCAAAGCAACCCATCAGCACTTCCGGAAACTGT
 GGTAGAGGTGCCACAAGTAACTGGGAAGATATTGGAGCCTGGAGGATGTCAAACGTGAGCTTCAGGAG
 TTGGTTCCAGTATCCTGTGGAACATCCAGACAAATCCTCAAATTTGGCATGACTCCCTCAAAGGCGTTC
 TTTTCTATGGACCTCCTGGCTGTGGAAAACCTTACTGGCTAAAGCCATTGCTAATGAATGCCAGGCCAA
 CTTTCATCTCCATCAAGGGTCTGAGCTGCTTACCATGTGGTTTGGGGAATCTGAGGCCAATGTCCGGGAA
 ATTTTTGACAAGGCACGGCAAGTGCCTCCTGTACTCTTCTTTGATGAGTTAGATTCAATTGCCAAGG
 CTCGAGGTGGTAATATTGGAGATGGTGGTGGAGCTGCTGACCGAGTCATCAATCAGATCCTGACAGAAAT
 GGATGGCATGTCTACAAAAAGAATGTGTTTATCATTGGAGCTACCAACAGGCCTGACATCATTGATCCT
 GCTATCCTAAGACCTGGCCGTCTAGATCAGCTCATTTATATCCCACTTCTGATGAGAAGTCCCCTGTTG
 CCATCCTAAAAGCCAATCTGCGAAAGTCCCCAGTTGCCAAGGATGTGGATTTGGAGTTTCTGGCTAAGAT
 GACTAATGGCTTTTCTGGAGCTGATTTGACAGAAATTTGCCAACGGGCTTGTAACCTGGCCATTCTGTGAA
 TCTATTGAGAGTGAGATTAGGCGAGAACGAGAGAGGCAGACAAATCCATCGGCTATGGAGGTAGAAGAGG
 ACGATCCAGTGCCTGAGATCCGAGAGATCACTTTGAGGAAGCCATGCGTTTTGCCCGACGTTCTGTGAG
 CGATAATGACATTCGGAAGTATGAAATGTTCCGCCAGACACTGCAGCAGAGTCGAGGTTTTGGCAGCTTC
 AGATTCCTTTCAGGGAACCGGTTGGAGCTGGTCCCAGCCAGGGCAGTGGAGGTGGCAACAGGTGGCAGTG
 GTACACAGAAGACAATGACGATGACCTGTATGGCTAAGTGATGTGCCAGCATGCAGCGAGCTGGCCTGG
 CTGGACCTTGTCCCTGGGGGAGGGGGCCTTGCCCAAGAGGGACCAGGGGTGTGCCCATGGCCTGTTCC
 ATTCCTCAGTCTGAACAGTTCAGCCCCAGTCAGACTCTGGACAGGGGTTTCTGTTGCAAAAAAAAAAAAAA AAAAAA

Restriction Sites: Ascl-NotI
ACCN: NM_009503
Insert Size: 2421 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).
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:	<ol style="list-style-type: none">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:	<u>BC049114</u> , <u>AAH49114</u>
RefSeq Size:	2876 bp
RefSeq ORF:	2421 bp
Locus ID:	269523
UniProt ID:	<u>Q01853</u>
Cytogenetics:	4 22.95 cM

Gene Summary:

Necessary for the fragmentation of Golgi stacks during mitosis and for their reassembly after mitosis. Involved in the formation of the transitional endoplasmic reticulum (tER). The transfer of membranes from the endoplasmic reticulum to the Golgi apparatus occurs via 50-70 nm transition vesicles which derive from part-rough, part-smooth transitional elements of the endoplasmic reticulum (tER). Vesicle budding from the tER is an ATP-dependent process. The ternary complex containing UFD1, VCP and NPLOC4 binds ubiquitinated proteins and is necessary for the export of misfolded proteins from the ER to the cytoplasm, where they are degraded by the proteasome. The NPLOC4-UFD1-VCP complex regulates spindle disassembly at the end of mitosis and is necessary for the formation of a closed nuclear envelope. Regulates E3 ubiquitin-protein ligase activity of RNF19A. Component of the VCP/p97-AMFR/gp78 complex that participates in the final step of the sterol-mediated ubiquitination and endoplasmic reticulum-associated degradation (ERAD) of HMGCR. Involved in endoplasmic reticulum stress-induced pre-emptive quality control, a mechanism that selectively attenuates the translocation of newly synthesized proteins into the endoplasmic reticulum and reroutes them to the cytosol for proteasomal degradation. Plays a role in the regulation of stress granules (SGs) clearance process upon arsenite-induced response (By similarity). Also involved in DNA damage response: recruited to double-strand breaks (DSBs) sites in a RNF8- and RNF168-dependent manner and promotes the recruitment of TP53BP1 at DNA damage sites. Recruited to stalled replication forks by SPRTN: may act by mediating extraction of DNA polymerase eta (POLH) to prevent excessive translesion DNA synthesis and limit the incidence of mutations induced by DNA damage. Required for cytoplasmic retrotranslocation of stressed/damaged mitochondrial outer-membrane proteins and their subsequent proteasomal degradation. Essential for the maturation of ubiquitin-containing autophagosomes and the clearance of ubiquitinated protein by autophagy. Acts as a negative regulator of type I interferon production by interacting with DDX58/RIG-I: interaction takes place when DDX58/RIG-I is ubiquitinated via 'Lys-63'-linked ubiquitin on its CARD domains, leading to recruit RNF125 and promote ubiquitination and degradation of DDX58/RIG-I. May play a role in the ubiquitin-dependent sorting of membrane proteins to lysosomes where they undergo degradation. May more particularly play a role in caveolins sorting in cells. By controlling the steady-state expression of the IGF1R receptor, indirectly regulates the insulin-like growth factor receptor signaling pathway.[UniProtKB/Swiss-Prot Function]