

Product datasheet for **MR218234**

Vps41 (NM_172120) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Vps41 (NM_172120) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Vps41
Synonyms:	A1317346; mVam2; Vam2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide
Sequence:**

>MR218234 representing NM_172120
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGGCGGAAGCAGAGGAGCAGGAAACCGAGTCTCTTGAAGAATCTACGGATGAGTCAGAGGAAGAAAGTG
 AAGAGGAACCCAACTGAAGTATGAAAGGCTTTCCAATGGGGTGACAGAGATTCTTCAGAAGGATGCAGC
 AAGCTGTATGACGGTCCATGACAAGTTTTTGGCACTGGGAACACATTATGGCAAGTTTTATTACTTGAT
 GTCCAGGGAAACATCACTCAGAAGTTTGTGTAAGTCCTGTGAAGATAAACCAAATTAGCTTGGATGACA
 GTGGAGAACACATGGGAGTGTGTTAGAGGATGGCAAGCTGCAGGTCTTTGGGCTGTATTCTGGAGAAGA
 ATTTACAGAGACTTTGACTGTCCATTAAAATCATTGCTGTGCACCCACAGTTCGTGAGATCCAGTTGT
 AAGCAGTTGTGACTGGCGGAAAAAGCTGCTGCTGTTTGAACGGACCTGGATGAACAGATGGAAGTCTT
 CTGTGCTACACGAAGGGGAAGGAAACATAAAGGAGTGTGAAGTGGAGAGGCCATCTGATTGCTTGGCCAA
 CAATATGGGTGTGAAGTTTTTACATCACCTCAAAGCAAAGAATCAGCAATGTGCCCGAGATGACATA
 AGTCTTCGCCAGACATGTACCCCTGCAGCCTCTGCTGGAAGGACAATGTGACACTCATTATTGGCTGGG
 GAACCTCCATCAAGATATGCTCAGTGAAGGAACGCCACGCCAGTGAAGTGAAGGATCTGCCAAGCCGATA
 TGTGAGATAGTGTCTCAGTTTGAACCTGAATTCTACATTAGTGGACTTGCACCTCTCTGTGATCAGCTT
 GTTGTACTTTCTACGTAAGGAGGTTTTAGAAAAACGGAAAGAGAATACTGTGCAAGACCTAGACTGG
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 GGAGAATGAATGTAGGGATTACCACTTAGAATACTCCGAGGGGAATCACTCTTCTATGTCGTGAGTCCA
 AGAGATGTCGTCGTAGCCAAGGAACGAGACCAGGATGATCACATCGATTGGCTCCTTGAGAAGAAGAAAT
 ATGAAGAAGCTTTGATGGCTGCTGAAATTAGCCAAAGGAACATTAAACGACATAAGATTTGGATTGG
 GTTGGCATATGTAACCCACTGGTGGAGAGAGGAGTACGACATGGCTGCAAGAAAAATGCCAGAAAATT
 CTTGGGAAAAATGCATCCCTCTGGGAATACGAAGTTTACAAATTTAAAGAAATTGGGCAGCTTAAAGCAA
 TTAGTCCCTATTTACCTCGAGGGGACCCAGTCTGAAACCACTCATCTATGAAATGATTTGACACGAATT
 TCTGGAAGTGACTATGAGGGCTTTGCCACATTGATCAGAGAGTGGCCTGGAGATCTATATAACAATTCC
 GTGATAGTTCAGGCAGTTCGAGACCACCTGAAGAAGGACAGTCAGAACAAAACGTTATTGAAAACACTGG
 CAGAATGTACACCTATGACAAAAATTATGGCAATGCTCTGGAATATACTTAACGTTAAGACATAAAGA
 TGTTTTCCAAGTATACACAAGCATAATCTTTTACAGTCCATCAAGGATAAAAATTGTGTTATTAATGGAT
 TTTGATTCAGAGAAAGCTGTTGACATGCTTTTGGACAATGAAGATAAAAATTTCAATTAAGAAAGTGGTAG
 AAGAAATGAAGACAGACCAGAAGTGCAGCATGTGATTTGCACAAGCTCTTCAAGAGAGACCATCATAA
 GGGACAGCGCTACCATGAAAAGCAGATCAGTCTGTATGCCGAGTATGACCGACCAAACTGCTTCCCTTT
 CTCCGAGACAGTACCCATTGCCCACTTGAAGGCACTTGAAGTCTGTCAACAAAGAACTTTGTAGAAG
 AGACAGTTACCTTCTGAGCCGAATGGGAAACAGTAGAAGTGCCTCAAGATGATTATGGAGGAATTGCA
 TGATGTTGATAAAGCAATTGAGTTTGGCAAGGAACAAGATGATGGAGAGCTCTGGGAAGATCTGATTCTA
 TACTCCATCGACAAACCACCTTATCACTGGCTTGTGAAACAACATTGGCACACATGTGGACCCGATTC
 TACTTATCCACCGAATTAAGGAAGGAATGGAGATCCCAATTTGAGAGATTCCTTGGTAAAAATTCGCA
 AGATTATAACTTGCAGATTCTGCTTCGAGAAGGCTGCAAGAAAAATCCTCGTAGCTGACTCATTGTGCTTG
 CTGAAAAAAATGCACCGAACCCAAATGAAAGGCGTTCTGTTGATGAAGAGAAATATCTGTGAATCATGCC
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 AACCGTGGCCTGGAAGTCCATCTGGAGATGAAGAAG

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >MR218234 representing NM_172120
 Red=Cloning site Green=Tags(s)

MAEAAEQETESLEESTDESEEESEEEPKLYERLSNGVTEILQKDAASCMTVHDKFLALGTHYGKVVLLD
 VQGNITQKFDVSPVKINQISLDDSGEHMGVCSDEGKLQVFLYSGEFHEFTDCPIKIIAVHPQFVRSSC
 KQFVTGGKLLLFERTWMNRWKS SVLHEGEGNIRSVKWRGHLIAWANNMGVKVFDITSKQRISNVPRDDI
 SLRPDMYPCSLCWKDNVTLLIIGWGTSIKICSVKERHASEMRDLPSRYVEIVSQFETEFYISGLAPLCDQL
 VVLSYVKEVSEKTEREYCARPLDIIQPLPETCEEISSDALTVRGFQENECRDYHLEYSEGESLFYVVS
 RDVVVAKERDQDDHIDWLLLEKKKYEEALMAAEISQRNIKRHKILDIGLAYVNHLVERGEYDMAARKCQKI
 LGKNASLWEYEVYKFEIGQLKAI SPYLP RGD PV LKPLIYEMILHEFLES DYEGFATLIREWPGDLYNNS
 VI VQAVRDHLKKDSQNKTL LKTLAELTYDKNYGNALEIYLTLRHKDVFLIHKHNL FSSIKDKIVLLMD
 FDSEKAVDMLLDNEDKISIKKVVEELED RPELQH VYLHKLFRDHHKQRYHEKQISLYAEYDRPNLLPF
 LRDSTHCPLEKALEICQQRNFVEETVYLLSRMGNSRSALKMIMEELHDVDKAI EFAKEQDDGELWEDLIL
 YSIDKPPFITGLLNNIGTHVDPILLIHRKEGMEIPNLRDSL VKILQDYNLQILLREGCKKILVADLSL
 LKKMHRTQMKGVLVDEENICESCLSPILPTDAKPF SVVVFHCRHMFHKECLPMP SMNAPAQYCNICSAK
 NRGPGSAILEMKK

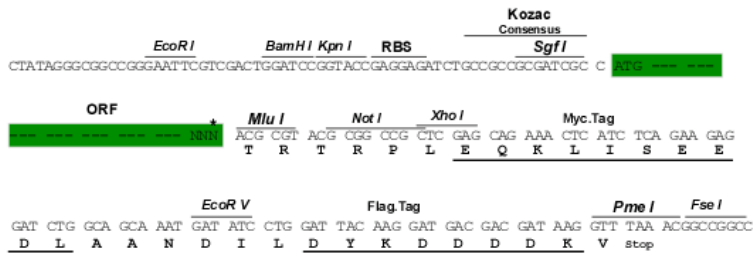
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mm9047_c11.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:

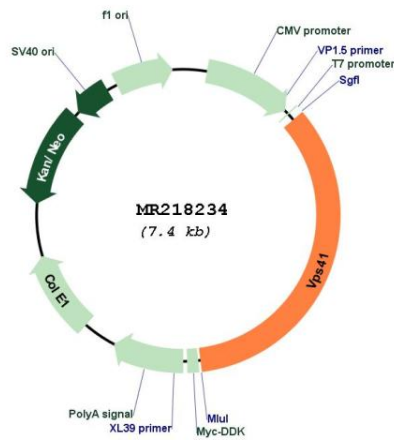


* The last codon before the Stop codon of the ORF

ACCN:	NM_172120
ORF Size:	2559 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:	<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:	NM_172120.4 , NP_742118.3
RefSeq Size:	3212 bp
RefSeq ORF:	2562 bp
Locus ID:	218035
UniProt ID:	Q5KU39
Cytogenetics:	13 6.75 cM
MW:	99.1 kDa

Gene Summary:

Plays a role in vesicle-mediated protein trafficking to lysosomal compartments including the endocytic membrane transport and autophagic pathways. Believed to act in part as a core component of the putative HOPS endosomal tethering complex is proposed to be involved in the Rab5-to-Rab7 endosome conversion probably implicating MON1A/B, and via binding SNAREs and SNARE complexes to mediate tethering and docking events during SNARE-mediated membrane fusion. The HOPS complex is proposed to be recruited to Rab7 on the late endosomal membrane and to regulate late endocytic, phagocytic and autophagic traffic towards lysosomes. Involved in homotypic vesicle fusions between late endosomes and in heterotypic fusions between late endosomes and lysosomes implicated in degradation of endocytosed cargo. Required for fusion of autophagosomes with lysosomes. May link the HOPS complex to endosomal Rab7 via its association with RILP and to lysosomal membranes via its association with ARL8B, suggesting that these interactions may bring the compartments to close proximity for fusion. Involved in the direct trans-Golgi network to late endosomes transport of lysosomal membrane proteins independently of HOPS. Involved in sorting to the regulated secretory pathway presumably implicating the AP-3 adaptor complex. May play a role in HOPS-independent function in the regulated secretory pathway (By similarity). [UniProtKB/Swiss-Prot Function]

Product images:

Circular map for MR218234