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Title	Structure and assembly of TP901-1 virion unveiled by mutagenesis
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Oligonucleotide name	Oligonucleotide sequence (5' → 3')
Recombineering primers^w	
NZ9000-Cro ₇₁₂ ::BamHI	C*T*C*C*A*TGATTGTTTCGCTTGTTTGACTTTATGAGTTA <u>GGATCCTG</u> ATCGTCGTTGCAACTTGTCAACCATTAAGGTTGTTTT
Portal _{TP901-1} ::Ter	T*T*T*T*T*GTCCTCGTCAACACCATATCTCACGGCAAAT <u>AGAATTC</u> AAGGCTCTTGTTTGACTGTATCGTCATAGACCATAAAA
MCP1 _{TP901-1} ::Ter	T*C*A*A*C*TAAACTGTTATATCCTTCCTTTGGAACGCTTAT <u>GAATTC</u> AACCAAGAATTCGGCTTGCTTTCAAATTCGTGAG
MCP2 _{TP901-1} ::Ter	G*C*T*A*T*AATTTCTTCAACAACATTTCTATCACCGTCAAT <u>GAATTC</u> AATAGTAATGATAGAATTTATTTCTTTTTTAAAGATGA
Sfp _{TP901-1} ::Ter	T*T*A*G*C*T*TTTTGAAGTTCGGCAGCTTTTTCTCGTCAG <u>GAATTC</u> ATTTTTCTTTAACTGACTTTTTGCCACCTTTTTCAAG
MHP _{TP901-1} ::Ter	C*C*C*C*G*TCAACGTTTGCTTTAGTAGAAACAGTTTGAG <u>CGAATTC</u> AGGTAGTCTTAGCTGCGCTCAATAAGTCGTCATCGA
MCP3 _{TP901-1} ::Ter	T*A*G*T*T*TCAAGAAGCTCTTTAGCTGATTAACGGTAAGCGT <u>GAATTC</u> ACGTTAGTTCATCATTTTTTCACCTTGCTTGGTCGCATTTATG
HTC1 _{TP901-1} ::Ter	A*C*A*T*A*TTCTAGTTCGTGGCGGTACTTCTTTAATGTCAAG <u>GAATTC</u> AACCAAGAATAAGCAATAAACGGTCAAGAGTGCCTTT
HTC2 _{TP901-1} ::Ter	T*C*A*T*T*CGCATGACTTTTGCCCTTTTTTAATATCTCCAAA <u>GAATTC</u> AACTTCTACACTTCTGTCAAGTTCGAATATCAGTGATATTT
Tap _{TP901-1} ::Ter	G*T*T*C*A*ACACCTTTAAAGATGCTGCTTTATCC <u>GAATTC</u> CAATGCTTTACAAGTTGGTCAATCCCTTTAAAGATAAGCTA
Ttp _{TP901-1} ::Ter	T*C*A*T*T*GGCTTATAATCATAAACGGTATACCCAAAGCT <u>CATC</u> ATCGTTTGAACAATTCGTCAAAAATAGATTGGTCTCGAG
MTP _{TP901-1} ::Ter	A*C*T*T*G*CTTTTCTGCTTTATCAATTTCCACACTTCA <u>TGAATTC</u> CATAATTGCTGCATCATCAAACGCTTTGTCCATTTTCGT
gpT _{TP901-1} ::Ter	G*T*T*T*C*TGTTTCGATTTTCTAAAAATAATACATTCGAT <u>AGAATTC</u> AAGTTGCAATGTTAGCCATTTCTAGTTCAGGAATGAT
gpT _{TP901-1} ::BamHI	T*C*A*G*C*TATTTGGTCATTTTGGCTTTGATTAACCTTTCC <u>GGATCC</u> CGTATTGCTTTCAGTAATTTCTTTCAAAACATCATCA
gpGf ₅ T _{TP901-1}	C*A*A*A*C*TTTTTCAGCTATTTGGTCATTTTTGGCTTTGAT <u>CAGCTT</u> ACCAGTATTGCTTTCAGTAATTTCTTTCAAAACATCATCA
Screening primers^x	
Cro- <i>t</i> 712-Fw	CTTCAAGATATTCATCGCTCAGACGG
Cro- <i>t</i> 712-MidFw	TTGCAACGACGATCAGGATCC
Cro- <i>t</i> 712-Rv	TCGTAATCATCAAGCGCATGTTCC
Scrnseq-Portal-Fw	GCAATGACAACCTTATCAGCGTGA
Scrn-Portal -MidRv	CACCATATCTCACGGCAAATAGAATTC
Seq-Portal -Rv	ACTGGTAAATCTGGATATGGGTTG
Scrnseq-MCP1-Fw	GAGAAAGCTTGGCAAGAGCA
Scrn-MCP1-MidRv	CTTCCTTTGGAACGCTTATGAATTC
Seq-MCP1-Rv	ATGCATGTTTGGTGCATTAATACCA
Scrnseq-MCP2-Fw	CATTCAGTTTTAGGTTATGGGAACAT
Scrn-MCP2-MidRv	AACATTTCTATCACCGTCAATGAATTC
Seq-MCP2-Rv	TTACGCCTGCTCTTACCAA
Scrnseq-Sfp-Fw	GACGTGAAGAGAATCATTGTACCAGA
Scrn-Sfp-MidRv	GCAGCTTTTTCTTCGTCAGGAATTC
Seq-Sfp-Rv	TTCATCAGCTTGACTGGTAATGT
Scrnseq-MHP-Fw	GAATTGGTAAAGAGCAGGCTGA
Scrn-MHP-MidFw	GCTTTAGTAGAAACAGTTTGAGGAATTCG
Seq-MHP-Rv	GGCTTGTGCATCCTCATCAT
Scrnseq-MCP3-Fw	ACTGTTTCTACTAAAGCAAACGTTG
Scrn-MCP3-MidRv	TGATTAACGGTAAGCGTGAATTC

Seq-MCP3-Rv	AACAGTTCTGGTAGGCTCCTT
Scrnseq-HTC1-Fw	ACGGAACTTACGCTGATGT
Scrn-HTC1-MidRv	CGGTACTTCTTTAATGTCAGGAATTC
Seq-HTC1-Rv	CTTCTTGTGAGTAGGACTGCAT
Scrnseq-HTC2-Fw	TTGCTTATGGCTATCACTGATGA
Scrn-HTC2-MidRv	CCCTTTTTTAATATCTCCAAA <u>GAAATTC</u>
Seq-HTC2-Rv	GGATTCGTTTGAACAATTCGTCA
Scrnseq-Tap-Fw	GTAATCGAAAAACGCACTCGTG
Scrn-Tap-MidRv	CTTTAAAGATGCTGCTTTATCCAGAAATTC
Seq-Tap-Rv	ACAAAAGGTTGAGCAGATTGA
Scrnseq-Ttp-Fw	TGATTTAGGCGAATGGGTTGA
Scrn-Ttp-MidRv	GGTATACCCCAAAGCTCATCA
Seq-Ttp-Rv	TGTATTTGTTGTTGTATCGTCCA
Scrnseq-MTP-Fw	CACCTCAAATATGACAGCGAATATGCAG
Scrn-MTP-MidFw	TTGATGATGCAGCAATTATGAATTC
Seq-MTP-Rv	CAATGTTAGCCATTTCTAGTTCAGGA
Scrnseq-gpG-Fw	GGAAACTTGCATTCCAAACAGA
Scrn-gpG-MidRv	CGATTTCCATAAAAAATAATACATTCGATAGAATTC
Seq-gpG-Rv	TTCGCATTCAATAAAAATCATCAA
Scrnseq-gpT-Fw	TCTCTTATGAACCTAACTCAGAAGATGCG
Scrn-gpT-MidRv	CATTTTTGCTTTGATTAACCTTCCGGATCC
Seq-gpT-Rv	AAGTTTTGAACCTGTTTAGCAGCGTC
Scrnseq-gpGfsT-Fw	ACTTGCTGTTAAAATCATTCCCTGAACT
Scrn-gpGfsT-MidRv	ACTGAAAGCAATAC <u>TGGTAAAGCTG</u>
Seq-gpGfsT-Rv	TTCTCTGGGCTTTCGATTCTTA

Recombinant protein primers^{1, #}

pNZ-PortalTuc-Fw	AGCAGCC <u>CCATGGT</u> GAAATTTGAAACCAATAAA
pNZ-PotalTuc-Rv	AGCAGC <u>ACTAGT</u> TTAATGGTGATGGTGATGGTGCCCCCTCATTTGTTTCATTCTC
pNZ-MCP1Tuc-Fw	AGCAGCC <u>CCATGG</u> ATTCATCTGATTAAGTGGAG
pNZ-MCP1Tuc-Rv	AGCAGC <u>ACTAGT</u> TTAGTGATGGTGATGGTGATGCCTTTTCTTTTATTGC
pTX-MCP2Tuc-Fw	AGCAGC <u>GGATCC</u> ATGGCTAAAGATGATTTCTT
pTX-MCP2Tuc-Rv	AGCAGC <u>ACTAGT</u> TTAGTGATGGTGATGGTGATGAGTTCCTGGTATCCAGTCTTTT
pNZ-SfpTuc-Fw	AGCAGC <u>CCATGGA</u> ACAAACAGAACTTTT
pNZ-SfpTuc-Rv	AGCAGC <u>ACTAGT</u> TTAGTGATGGTGATGGTGATGATAGCCTCCTGTAAATTTT
pTX-MHPTuc-Fw	AGCAGC <u>CCATGG</u> CAAAAACAAAAACAACACTTAC
pTX-MHPTuc-Rv	AGCAGC <u>ACTAGT</u> TTAGTGATGGTGATGGTGATGTACACCCGTAATGTGATATTA
pTX-MCP3Tuc-Fw	AGCAGC <u>GGATCC</u> ATGGGGCGGCTACTAAGTCG
pTX-MCP3Tuc-Rv	AGCAGC <u>ACTAGT</u> TTAGTGATGGTGATGGTGATGTAAGTGATGCCATAAGCAA

pTX-HTC1Tuc-Fw	AGCAGC <u>GGATCC</u> ATGGCTATCACTTATGAAAT
pTX-HTC1Tuc-Rv	AGCAGC <u>ACTAGT</u> TTAGTGATGGT GATGGT GATGATACAATCTGAACCTCCCTATCTTC
pTX-TapTuc-Fw	AGCAGC <u>GGATCC</u> ATGAAAATAACTGGAATTGA
pTX-TapTuc-Rv	AGCAGC <u>ACTAGT</u> TTAGTGATGGT GATGGT GATGTTTCGTC AACCTTTCTAA

- * Phosphorothioate linkages of recombineering oligos.
- ψ Nucleotides of recombineering oligos which are designed to introduce or alter the base sequence of TP901-1erm are underlined once, while introduced restriction enzyme sites are double underlined.
- ¥ Nucleotides of screening oligos which bind to mutated bases are underlined.
- ‡ Restriction enzymes sites of recombinant protein construct oligos are double underlined.
- # Hexahistidine tags are indicated in bold.