

Title	Structure and assembly of TP901-1 virion unveiled by mutagenesis
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Publication date	2015
Original Citation	Stockdale SR, Collins B, Spinelli S, Douillard FP, Mahony J, Cambillau C, et al. (2015) Structure and Assembly of TP901-1 Virion Unveiled by Mutagenesis. PLoS ONE 10(7): e0131676. doi:10.1371/journal.pone.0131676
Type of publication	Article (peer-reviewed)
Link to publisher's version	10.1371/journal.pone.0131676
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Download date	2024-10-12 19:31:53
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Coláiste na hOllscoile Corcaigh

Strains, phages and plasmids	Relevant features	Source
<b><i>L. lactis</i></b>		
NZ9000	MG1363 <i>pepN::nisRK</i>	(51)
NZ9000-Cro <sub>t712</sub>	NZ9000 with point mutations inserting a BamHI site into prophage t712 anti-repressor (Cro) promoter sequence; contains plasmid pJP005	This study
NZ9000-Cro <sub>t712</sub> -TP901-1erm	NZ9000-Cro <sub>t712</sub> displaying t712 phenotype lysogenized with TP901-1erm prophage; contains plasmid pJP005	This study
901-1	Lysogenic host and source of TP901-1 prophage	(13)
3107	Lytic host for phage TP901-1erm	(23)
UC509	Lysogenic host and source of Tuc2009 prophage	(5)
UC509.9	Lytic host for phage Tuc2009	(1, 25)
NZ9700	Nisin over-producing strain	(50)
NZ9000-Cro <sub>t712</sub> -Portal <sub>TP901-1</sub> ::Ter	Translation termination codon insertion in TP901-1erm portal protein (ORF32)	This study
NZ9000-Cro <sub>t712</sub> -MCP1 <sub>TP901-1</sub> ::Ter	Translation termination codon insertion in TP901-1erm MCP1 (ORF33)	This study
NZ9000-Cro <sub>t712</sub> -MCP2 <sub>TP901-1</sub> ::Ter	Translation termination codon insertion in TP901-1erm MCP2 (ORF34)	This study
NZ9000-Cro <sub>t712</sub> -Sfp <sub>TP901-1</sub> ::Ter	Translation termination codon insertion in TP901-1erm Sfp (ORF35)	This study
NZ9000-Cro <sub>t712</sub> -MHP <sub>TP901-1</sub> ::Ter	Translation termination codon insertion in TP901-1erm MHP (ORF36)	This study
NZ9000-Cro <sub>t712</sub> -MCP3 <sub>TP901-1</sub> ::Ter	Translation termination codon insertion in TP901-1erm MCP3 (ORF37)	This study
NZ9000-Cro <sub>t712</sub> -HTC1 <sub>TP901-1</sub> ::Ter	Translation termination codon insertion in TP901-1erm HTC1 (ORF38)	This study
NZ9000-Cro <sub>t712</sub> -HTC2 <sub>TP901-1</sub> ::Ter	Translation termination codon insertion in TP901-1erm HTC2 (ORF39)	This study
NZ9000-Cro <sub>t712</sub> -Tap <sub>TP901-1</sub> ::Ter	Translation termination codon insertion in TP901-1erm Tap (ORF40)	This study
NZ9000-Cro <sub>t712</sub> -Ttp <sub>TP901-1</sub> ::Ter	Translation termination codon insertion in TP901-1erm Ttp (ORF41)	This study
NZ9000-Cro <sub>t712</sub> -MTP <sub>TP901-1</sub> ::Ter	Translation termination codon insertion in TP901-1erm MTP (ORF42)	This study
NZ9000-Cro <sub>t712</sub> -gpG <sub>TP901-1</sub> ::Ter	Translation termination codon insertion in TP901-1erm gpG (ORF43)	This study
NZ9000-Cro <sub>t712</sub> -gpT <sub>TP901-1</sub> ::BamHI	Insertion mutation in TP901-1erm gpG (ORF43) disrupting gpT (ORF44) production	This study
NZ9000-Cro <sub>t712</sub> -gpGfsT <sub>TP901-1</sub>	Insertion and nucleotide altering mutation in TP901-1erm gpG (ORF43) causing a frameshift and permanently fusing it in frame to gpT (ORF44)	This study
<b>Phages</b>		
TP901-1erm	Temperate P335 species phage infecting 3107; contains erythromycin marker	(13, 48, 94)
Tuc2009	Temperate P335 species phage infecting UC509.9	(25)
<b>Plasmids</b>		
pNZ8048	Nisin-inducible protein expression vector	(27)
pTX8049	pNZ8048 derivative expression vector; recombinant N-terminal thioredoxin fusion	(31)
pJP005	pNZ8048 derivative expressing RecT protein required for recombineering mutagenesis	(86)
pNZ8048-Portal <sub>Tuc2009</sub>	Tuc2009 Portal protein (ORF33) expression construct; Genbank coordinates 16486-17847	This study
pNZ8048-MCP1 <sub>Tuc2009</sub>	Tuc2009 MCP1 (ORF34) expression construct; Genbank coordinates 17844..18884	This study
pTX8049-MCP2 <sub>Tuc2009</sub>	Tuc2009 MCP2 (ORF35) expression construct; Genbank coordinates 18930..19262	This study
pNZ8048-Sfp <sub>Tuc2009</sub>	Tuc2009 Sfp (ORF36) expression construct; Genbank coordinates 19388..20050	This study
pTX8049-MHP <sub>Tuc2009</sub>	Tuc2009 MHP (ORF37-39) expression construct; Genbank coordinates 20052..22183	This study
pTX8049-MCP3 <sub>Tuc2009</sub>	Tuc2009 MCP3 (ORF40) expression construct; Genbank coordinates 22183..22383	This study
pTX8049-HTC1 <sub>Tuc2009</sub>	Tuc2009 HTC1 (ORF41) expression construct; Genbank coordinates 22367..22699	This study
pTX8049-Tap <sub>Tuc2009</sub>	Tuc2009 Tap (ORF43) expression construct; Genbank coordinates 23004..23330	This study