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Title	Structure and assembly of TP901-1 virion unveiled by mutagenesis
Author(s)	Stockdale, Stephen R.; Collins, Barry; Spinelli, Silvia; Douillard, François P.; Mahony, Jennifer; Cambillau, Christian; van Sinderen, Douwe
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Strains, phages and plasmids	Relevant features	Source
<i>L. lactis</i>		
NZ9000	MG1363 <i>pepN::nisRK</i>	(51)
NZ9000-Cro _{t712}	NZ9000 with point mutations inserting a BamHI site into prophage t712 anti-repressor (Cro) promoter sequence; contains plasmid pJP005	This study
NZ9000-Cro _{t712} -TP901-1erm	NZ9000-Cro _{t712} 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 _{t712} -Portal _{TP901-1} ::Ter	Translation termination codon insertion in TP901-1erm portal protein (ORF32)	This study
NZ9000-Cro _{t712} -MCP1 _{TP901-1} ::Ter	Translation termination codon insertion in TP901-1erm MCP1 (ORF33)	This study
NZ9000-Cro _{t712} -MCP2 _{TP901-1} ::Ter	Translation termination codon insertion in TP901-1erm MCP2 (ORF34)	This study
NZ9000-Cro _{t712} -Sfp _{TP901-1} ::Ter	Translation termination codon insertion in TP901-1erm Sfp (ORF35)	This study
NZ9000-Cro _{t712} -MHP _{TP901-1} ::Ter	Translation termination codon insertion in TP901-1erm MHP (ORF36)	This study
NZ9000-Cro _{t712} -MCP3 _{TP901-1} ::Ter	Translation termination codon insertion in TP901-1erm MCP3 (ORF37)	This study
NZ9000-Cro _{t712} -HTC1 _{TP901-1} ::Ter	Translation termination codon insertion in TP901-1erm HTC1 (ORF38)	This study
NZ9000-Cro _{t712} -HTC2 _{TP901-1} ::Ter	Translation termination codon insertion in TP901-1erm HTC2 (ORF39)	This study
NZ9000-Cro _{t712} -Tap _{TP901-1} ::Ter	Translation termination codon insertion in TP901-1erm Tap (ORF40)	This study
NZ9000-Cro _{t712} -Ttp _{TP901-1} ::Ter	Translation termination codon insertion in TP901-1erm Ttp (ORF41)	This study
NZ9000-Cro _{t712} -MTP _{TP901-1} ::Ter	Translation termination codon insertion in TP901-1erm MTP (ORF42)	This study
NZ9000-Cro _{t712} -gpG _{TP901-1} ::Ter	Translation termination codon insertion in TP901-1erm gpG (ORF43)	This study
NZ9000-Cro _{t712} -gpT _{TP901-1} ::BamHI	Insertion mutation in TP901-1erm gpG (ORF43) disrupting gpT (ORF44) production	This study
NZ9000-Cro _{t712} -gpGfsT _{TP901-1}	Insertion and nucleotide altering mutation in TP901-1erm gpG (ORF43) causing a frameshift and permanently fusing it in frame to gpT (ORF44)	This study
Phages		
TP901-1erm	Temperate P335 species phage infecting 3107; contains erythromycin marker	(13, 48, 94)
Tuc2009	Temperate P335 species phage infecting UC509.9	(25)
Plasmids		
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 _{Tuc2009}	Tuc2009 Portal protein (ORF33) expression construct; Genbank coordinates 16486-17847	This study
pNZ8048-MCP1 _{Tuc2009}	Tuc2009 MCP1 (ORF34) expression construct; Genbank coordinates 17844..18884	This study
pTX8049-MCP2 _{Tuc2009}	Tuc2009 MCP2 (ORF35) expression construct; Genbank coordinates 18930..19262	This study
pNZ8048-Sfp _{Tuc2009}	Tuc2009 Sfp (ORF36) expression construct; Genbank coordinates 19388..20050	This study
pTX8049-MHP _{Tuc2009}	Tuc2009 MHP (ORF37-39) expression construct; Genbank coordinates 20052..22183	This study
pTX8049-MCP3 _{Tuc2009}	Tuc2009 MCP3 (ORF40) expression construct; Genbank coordinates 22183..22383	This study
pTX8049-HTC1 _{Tuc2009}	Tuc2009 HTC1 (ORF41) expression construct; Genbank coordinates 22367..22699	This study
pTX8049-Tap _{Tuc2009}	Tuc2009 Tap (ORF43) expression construct; Genbank coordinates 23004..23330	This study