

Bacterial strains and plasmids

Strain or Plasmid	Relevant Genotype	Source
<i>E. coli</i>		
DH5 α	strain used for general cloning procedures	Invitrogen
DY380	DH10B derivative containing a defective λ prophage; <i>red</i> , <i>bet</i> and <i>gam</i> genes are controlled by the temperature-sensitive λ cI857 repressor	[14]
EC100D <i>pir</i> ⁺	host for propagation of plasmids containing the R6K γ origin of replication	Epicentre
<i>H. influenzae</i>		
2019	Nontypeable <i>H. influenzae</i> strain from a patient with chronic bronchitis	Michael Apicella
2019 <i>rpsL</i>	Streptomycin resistant derivative of NTHi 2019	Michael Apicella
2019 <i>rpsL</i> Δ <i>pilA</i> ::spec- <i>rpsL</i> _{Ng}	Derivative of NTHi 2019 <i>rpsL</i> with an insertion/deletion mutation in the <i>pilA</i> gene	this study
2019 <i>rpsL</i> Δ <i>pilA</i>	Derivative of NTHi 2019 <i>rpsL</i> with a non-polar mutation in the <i>pilA</i> gene	this study
2019 <i>pilA</i> :: Ω Km2	Derivative of NTHi 2019 with a polar mutation in the <i>pilA</i> gene	this study
Plasmids		
pUC19	cloning vector, source of the ColE1 origin	New England Biolabs
pGEM-T Easy	cloning vector	Promega
pWSK30	low copy number cloning vector	[21]
pLS88	<i>Haemophilus ducreyi</i> plasmid; useful as a shuttle vector	[23]
pSpecR	source of the spectinomycin resistance gene	[20]
pUC18K	source of the non-polar kanamycin resistance cassette	[9]
pUC Δ Ecat	source of the chloramphenicol	[25]
pJRS102.0	source of the Ω Km2 cassette	[26]
pKD13	template plasmid used for mutant construction in <i>E. coli</i> ; contains R6K γ origin of replication	[13]

pFT-A	source of the FLP recombinase gene under control of the <i>tet</i> regulatory system	[24]
pPIL1	shuttle vector containing the <i>pilABCD</i> gene cluster from NTHi strain 86-028NP	[4]
pRSM2790	spectinomycin resistance gene from pSpecR cloned into pWSK30	this study
pRSM2830	normal allele of the <i>Neisseria gonorrhoeae rpsL</i> gene in pRSM2790	this study
pRSM2832	pKD13 derivative used as a template plasmid for mutant construction in NTHi	this study
pRSM2848	derivative of pPIL1 lacking the <i>pilB</i> , <i>pilC</i> and <i>pilD</i> genes	this study
pRSM2855	<i>pil</i> gene cluster from NTHi 2019 cloned into pGEM-T Easy	this study
pRSM2857	<i>pilA</i> ::spec insertion/deletion mutation of pRSM2855	this study
pRSM2865	plasmid containing the origin of replication and kanamycin-resistance gene from pLS88. The origin of replication contains a point mutation conferring a temperature-sensitive phenotype	this study
pRSM2866	derivative of pRSM2865 containing the ColE1 origin from pUC19	this study
pRSM2921	<i>cya</i> gene and flanking DNA cloned into pGEM-T Easy	this study
pRSM2947	derivative of pRSM2866 containing the FLP recombinase gene from pFT-A (Figure 3)	this study
pRSM2948	derivative of pRSM2921 containing an insertion/deletion mutation of <i>cya</i>	this study
pRSM3004	derivative of pRSM2921 containing the chloramphenicol cassette in the <i>cya</i> gene	this study
