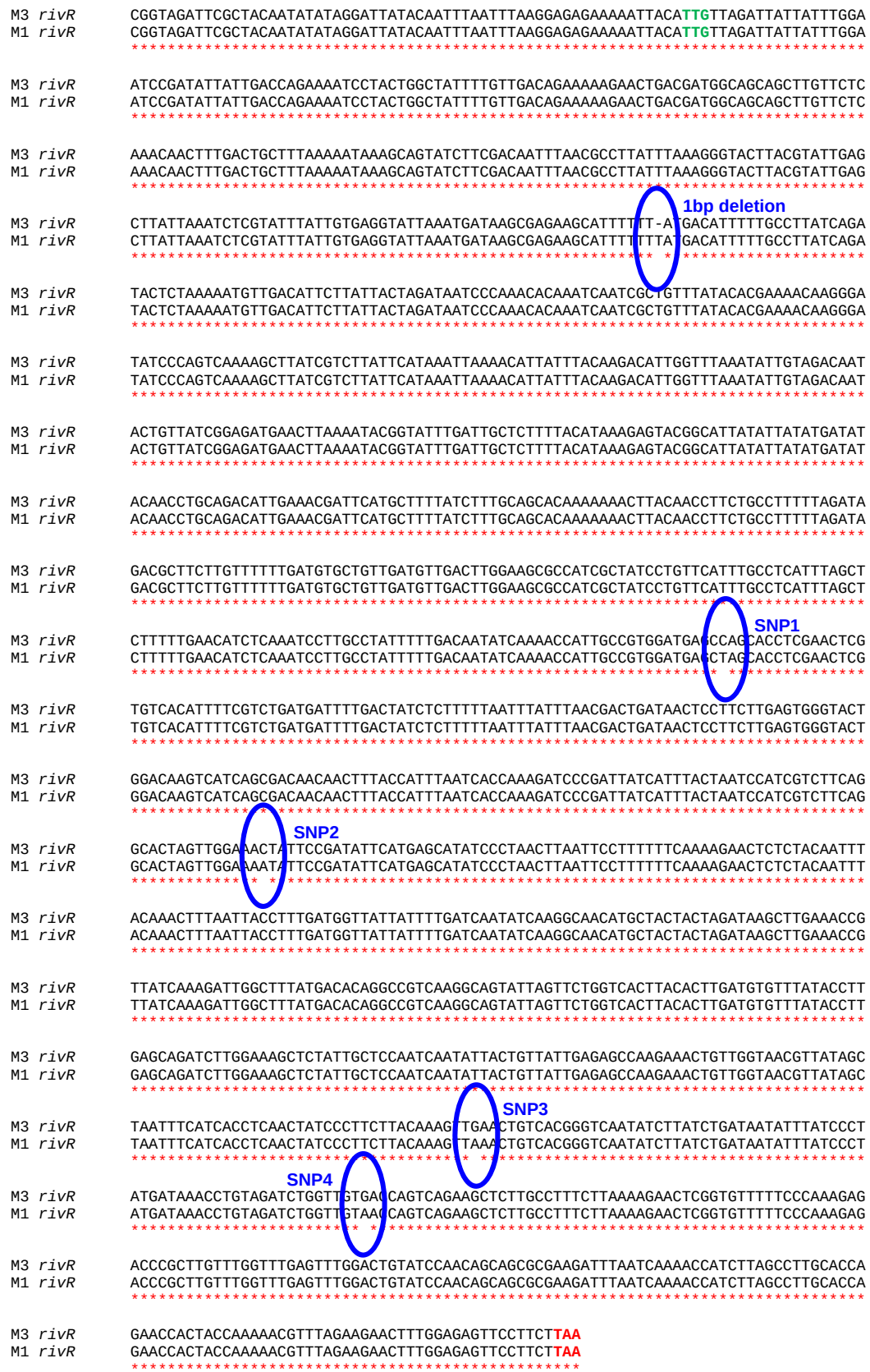

Figure S1
Alignment of the *rivR* gene from the clinical strains MGAS2221 and MGAS10870. The *rivR* gene plus upstream 60 nucleotides were aligned between MGAS2221 (M1 *rivR*) and MGAS10870 (M3 *rivR*). Red asterisks highlight nucleotide identity while gaps and blue ovals highlight differences. The start codon (TTG) is colored green and the stop codon (TAA) is colored red.

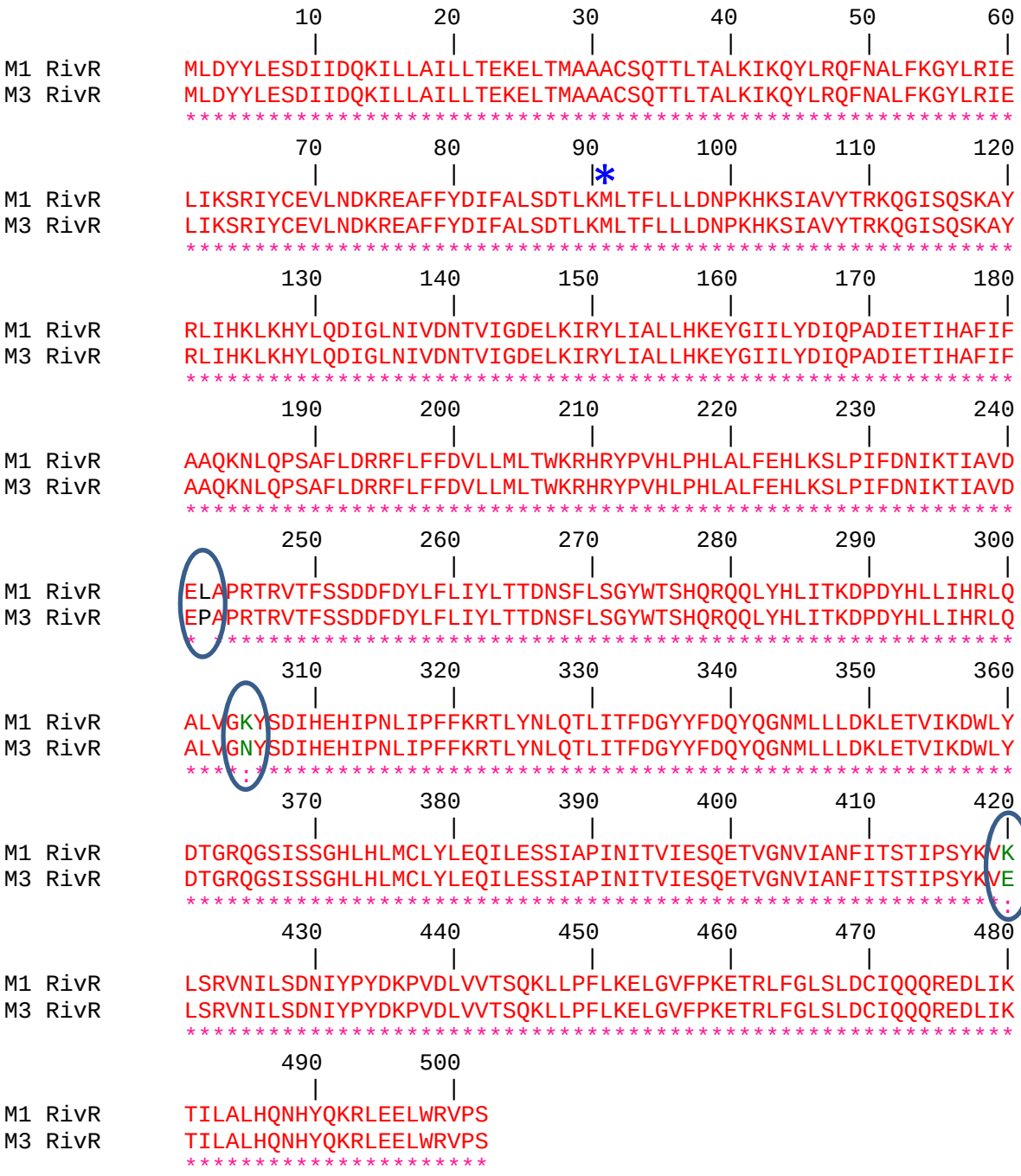

Figure S2
RivR amino acid alignment between strains MGAS2221 and 10870rivR^{+1bp}. Fixing the 1 bp deletion in the *rivR* gene of M3 GAS results in a protein with three amino acid substitutions relative to the RivR protein of MGAS2221 (highlighted with ovals). An asterisk highlights the location of the truncation, caused by the 1 bp deletion, in clinical M3 GAS *rivR* alleles.

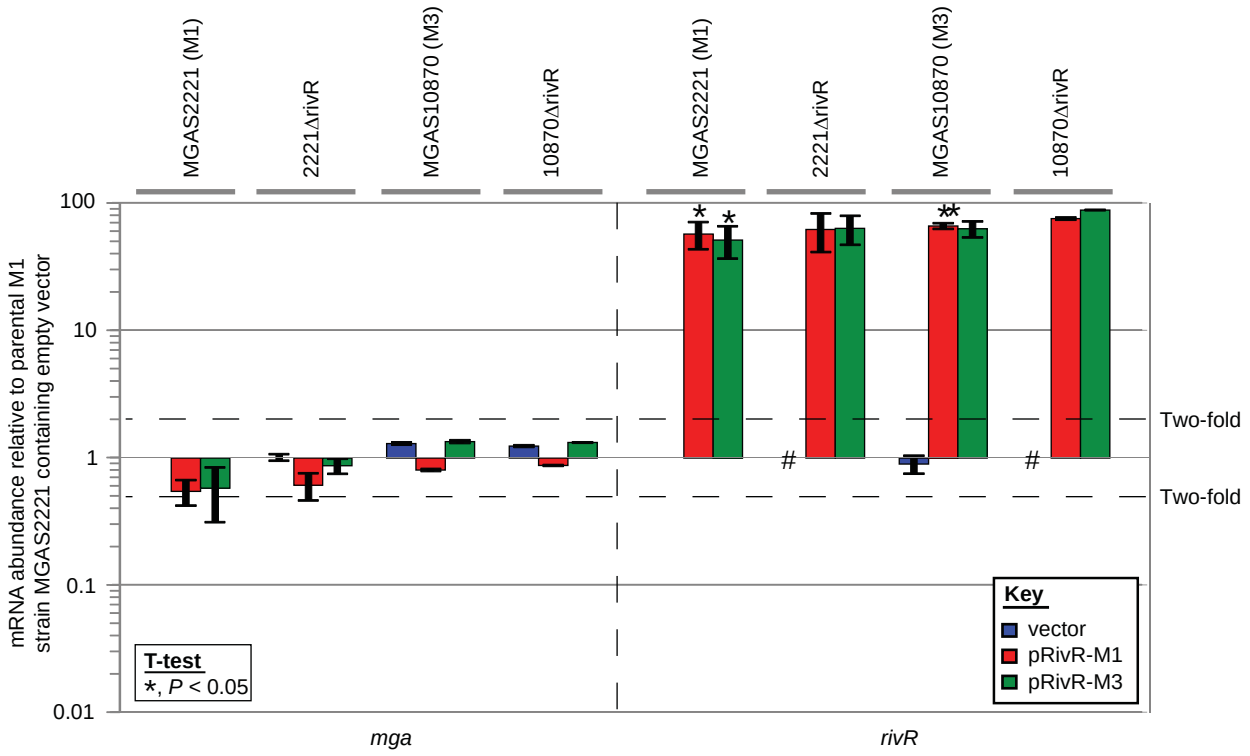

Figure S3

Analysis of *mga* and *rivR* mRNA levels between M1 and M3 GAS isolates containing different plasmid-encoded *rivR* alleles. Parental (MGAS2221) and full *rivR* deletion mutant (2221ΔrivR) M1 isolates, and parental (MGAS10870) and full *rivR* deletion mutant (10870ΔrivR) M3 isolates, were compared following transformation with either empty vector, a plasmid containing *rivR* from M1 GAS strain MGAS2221 (pRivR-M1), or a plasmid containing *rivR* from M3 GAS strain MGAS10870 (pRivR-M3). RNA from exponential phase cultures of the indicated strains were analyzed for *mga* and *rivR* mRNA levels by quantitative RT-PCR. Experiment was performed in triplicate with mean (± standard deviation) shown. Hashes (#) highlight the lack of detectable *rivR* mRNA in the two *rivR* mutant strains containing empty vector. Asterisks (*) highlight those samples that were statistically significantly different, via T-test, relative to the respective empty vector-containing strain.

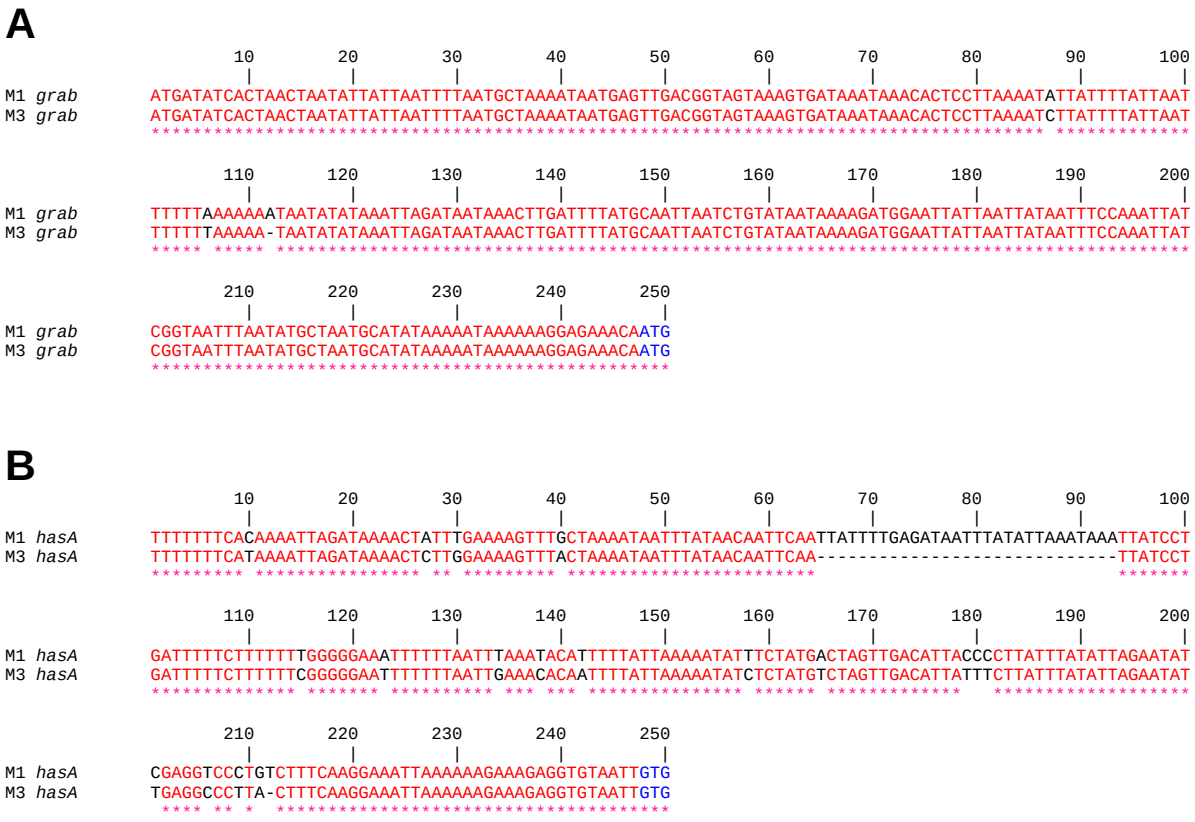

Figure S4.
Alignment of the nucleotides upstream of the *grab* and *hasA* mRNAs in strains MGAS2221 and MGAS10870. Nucleotides upstream of *grab* (**A**) or *hasA* (**B**) in the serotype M1 strain MGAS2221 and the serotype M3 strain MGAS10870 were aligned. Red nucleotides and asterisks highlight identity while black nucleotides highlight differences. The start codons of *grab* and *hasA* are shown in blue.

Primer name	Sequence (5' - 3')	Role
FASXNF	CTTATTACGACTCACTATAGGGAGCAAACAAAGACAACTGACATCG	Forward primer containing T7 promoter sequence that is used to generate template for *in vitro* transcription of a FasX-specific RNA probe
FASXNR	GAAGTCATGAGTTTATCGAG	Reverse primer that is used to generate template for *in vitro* transcription of a FasX-specific RNA probe
5SF	CTTAATACGACTCACTATAGGGAGCTAAGCGACTACCTTATCTC	Forward primer containing T7 promoter sequence that is used to generate template for *in vitro* transcription of a 5S RNA-specific RNA probe
5SR	GTTAAGTGACGATAGCCTAG	Reverse primer that is used to generate template for *in vitro* transcription of a 5S RNA-specific RNA probe
FASCA	CTTGCTTATCTGCTGATTTTTCC	Used in construction of the *fasC* mutant strain 2221ΔfasC (left flank primer)
FASCB	GTTATAGTTATTATAACATGTATTGGTAGCATAGAATAAAGCCATAC	Used in construction of the *fasC* mutant strain 2221ΔfasC (left flank primer)
FASCC	CTATTTAAATAACAGATTAAAAAAATTATAAGCGCTTTCGACTAAAAGTGACC	Used in construction of the *fasC* mutant strain 2221ΔfasC (right flank primer)
FASCD	CCAAACAAAGACAACTGACATC	Used in construction of the *fasC* mutant strain 2221ΔfasC (right flank primer)
FASCSPECF	GTATGGCTTTATTCTATGCTACCAATACATGTTATAATAACTATAAC	Used in construction of the *fasC* mutant strain 2221ΔfasC (spec cassette primer)
FASCSPECR	GGTCACTTTTAGTCGAAAGCGCTTATAATTTTTTTAATCTGTTATTTAAATAG	Used in construction of the *fasC* mutant strain 2221ΔfasC (spec cassette primer)
FASCE	TTATTAATTATATGATTGGAAAAG	Used to verify the *fasC* mutant strain 2221ΔfasC
FASCF	GAGCCATCATATCAAAAATAC	Used to verify the *fasC* mutant strain 2221ΔfasC
M3RIVR1	caaattttcatcaagctctagttcGAGGTGATGAAATTAGCTATAACGTTACC	Used with M3RIVR3 to generate the downstream flank used to fix the 1bp deletion in *rivR* that is present in serotype M3 isolates
M3RIVR2	GAGTATCTGATAAGGCAAAAATGTCATAAAaAAATGCTTCTCGCTTATCATTTAATACCTC	Used with M3RIVR5 to generate the upstream flank used to fix the 1bp deletion in *rivR* that is present in serotype M3 isolates
M3RIVR3	GAGGTATTAAATGATAAGCGAGAAGCATTTtTTTATGACATTTTTGCCTTATCAGATACTC	Used with M3RIVR1 to generate the downstream flank used to fix the 1bp deletion in *rivR* that is present in serotype M3 isolates
M3RIVR5	CTTGCATTGCTATAAAAATTAAGCCTG	Used with M3RIVR2 to generate the upstream flank used to fix the 1bp deletion in *rivR* that is present in serotype M3 isolates
M3RIVR8	GGTTTATCATAGGGATAAATATTATCAG	Used to verify that that 1bp deletion in the *rivR* gene has been fixed in isolates 10870rivR^{+1bp} and 10870fasC^{Comp}rivR^{+1bp}
M3RIVR9	GTCTTCGACGATTTGACCAAC	Used to verify that that 1bp deletion in the *rivR* gene has been fixed in isolates 10870rivR^{+1bp} and 10870fasC^{Comp}rivR^{+1bp}
M3FIXA	gctaggatccTGCCAGATAATATAAAAGAGACTTAC	Used with M3FIXB to generate the upstream flank used to fix the *fasC* mutation that is present in serotype M3 isolates
M3FIXB	CACAATAACCCAAATAAAAATAGCTAAATAAATAAATACTAAAATAGACCGGTAC	Used with M3FIXA to generate the upstream flank used to fix the *fasC* mutation that is present in serotype M3 isolates
M3FIXC	GTACCGGTCTATTTTAGTATTTATTTATTTAGCTATTTTTATTTGGGTTATTGTG	Used with M3FIXD to generate the downstream flank used to fix the *fasC* mutation that is present in serotype M3 isolates
M3FIXD	gctatctagaTTTGTCGAATAGCTGCAGCTAATTC	Used with M3FIXC to generate the downstream flank used to fix the *fasC* mutation that is present in serotype M3 isolates
M3FIXE	TATGCCCAAACGGTTCATGAAGC	Used to verify that the *fasC* gene has been fixed in isolates 10870fasC^{Comp}, 315fasC^{Comp}, and 10870fasC^{Comp}rivR^{+1bp}
M3FIXF	CGTAAGTATATCGGATACATTC	Used to verify that the *fasC* gene has been fixed in isolates 10870fasC^{Comp}, 315fasC^{Comp}, and 10870fasC^{Comp}rivR^{+1bp}
RIV2	CAGAACATGGGAGCGCACTTTttttaggatgttttcattctacg	Used with RIV84 to generate the upstream flank used to delete *rivR* from the genome of M3 isolate MGAS10870
RIV5	CAAATTTTCATCAAGCTCTAGTTCccagataatgttggtggtcgtttc	Used with RIV13 to generate the downstream flank used to delete *rivR* from the genome of M3 isolate MGAS10870
RIV6	GTAGAAGCTGACGCTAACAACTG	Used to verify that the *rivR* gene has been deleted in strain 10870ΔrivR
RIV13	cgtagaatgaaaacatcctaaaaAAAGTGCGCTCCCATGTTCTG	Used with RIV5 to generate the downstream flank used to delete *rivR* from the genome of M3 isolate MGAS10870
RIV84	TAGTTGGAAATACTATACTCAGTAACG	Used with RIV2 to generate the upstream flank used to delete *rivR* from the genome of M3 isolate MGAS10870
RIV86	TACCATAGCTCACTAAAGCCAACATTC	Used to verify that the *rivR* gene has been deleted in strain 10870ΔrivR
PROSTMP	TACCAATGCCGTTGCAGGAGCTAACAA	*proS* taqman probe
PROSTMF	GCTGACCGCAAAGTGCAAA	*proS* taqman primer
PROSTMR	TGACTCCTGTCATATGGAAACCA	*proS* taqman primer
SKATMF	CGGCTACTTTGAGGTCATTGATT	*ska* taqman primer
SKATMR	CCGAACCATCTTTGTCAGCAA	*ska* taqman primer
SKATMP	CAAGCGATGCAACCATTACTGATCGAAAC	*ska* taqman probe
GRABTMP	TGTTGACTCACCTATCGAACAGCCTCGA	*grab* taqman probe
GRABTMF	GCATCAGTATTAGTCGGTTCACAGT	*grab* taqman primer
GRABTMR	GGTTCCGCCATTTGGAATAA	*grab* taqman primer
HASATMP	ACGCACTGTCTACCAATCAACAGCTAGATGTG	*hasA* taqman probe
HASATMF	ATGATCGATGTTTAACAAATTATGCTATTG	*hasA* taqman primer
HASATMR	TTAAAATAACTTTTTAAATTGGAAAGGTACATCAG	*hasA* taqman primer
MGATMP	ACGTAACAGAAAACGCTGACGCCATTG	*mga* taqman probe
MGATMF	CAAGTCAACAGTGGAGAGAACTAAAATT	*mga* taqman primer
MGATMR	ATGGAGATGTTGAGAGCTTTGCT	*mga* taqman primer
RIVRTMP	ACTGTATCCAACAGCAGCGCGAAGATTT	*rivR* taqman probe
RIVRTMF	CCCGCTTGTTTGGTTTGAGT	*rivR* taqman primer
RIVRTMR	GGTGCAAGGCTAAGATGGTTT	*rivR* taqman primer
RIVRCP1	gctaggatccAACAGCAAAAATATGATTTC	Used with RIVRCP2 to clone the *rivR* gene from different GAS strains and clone them into vector pDC123
RIVRCP2	gctaatgcatAAAGACCCTCCTAGACTGTG	Used with RIVRCP1 to clone the *rivR* gene from different GAS strains and clone them into vector pDC123
RIVRSEQF	GATCAAAATAATAACCATCAAAGG	Used to amplify and sequence an internal region of the *rivR* gene to detemine whether the allele contains the 1 bp deletion
RIVRSEQR	CTTGTTCTCAAACAACTTTGAC	Used to amplify and sequence an internal region of the *rivR* gene to detemine whether the allele contains the 1 bp deletion
RIV7	GTCAAAAAGACTTCTTCCTTGTAC	Used to amplify the whole *rivR* gene prior to sequencing
C2RIV4	GTTTAAACCTGACCAGTTAACC	Used to amplify the whole *rivR* gene prior to sequencing
M3RIVR8	GGTTTATCATAGGGATAAATATTATCAG	Used to sequence the *rivR* gene
C2D	TAAAAAGGCAGAAGGTTGTAAG	Used to sequence the *rivR* gene
C2RIV5	GACAATACTGTTATCGGAGATG	Used to sequence the *rivR* gene
FASC87	CAGCTGTCTTAGGATTTAGCATTGGTC	Used to amplify and sequence an internal region of the *fasC* gene to detemine whether the allele contains the 4 bp deletion
FASC88	GTTGCCGATTGCTGAATAACC	Used to amplify and sequence an internal region of the *fasC* gene to detemine whether the allele contains the 4 bp deletion

Table S1
Table of primers and probes used in this study.

Strain	Serotype	Isolation year	Isolation location	*fasC* allele	*rivR* allele
MGAS1264	M1	1973	Denmark	Wild-type	Wild-type
SF370	M1	1985	Unknown	Wild-type	Wild-type
MGAS1508	M1	1985	Czechoslovakia	Wild-type	Wild-type
MGAS2221	M1	1988	Australia	Wild-type	Wild-type
MGAS313	M1	Late 1980s	Wyoming, USA	Wild-type	Wild-type
MGAS3350	M1	1995	Minnesota, USA	Wild-type	Wild-type
MGAS5005	M1	1996	Ontario, Canada	Wild-type	Wild-type
MGAS5804	M1	1997	Finland	Wild-type	Wild-type
MGAS22259	M1	2010	Alberta, Canada	Wild-type	Wild-type
MGAS1251	M3	1920s	UK	4bp deletion	SNPs
MGAS1254	M3	1937	New York, USA	4bp deletion	1bp deletion and SNPs
MGAS182	M3	1940s	Ottawa, Canada	4bp deletion	1bp deletion and SNPs
MGAS174	M3	1940s	Ottawa, Canada	4bp deletion	1bp deletion and SNPs
MGAS1372	M3	1969	Berlin, Germany	4bp deletion	1bp deletion and SNPs
MGAS1385	M3	1971	Madgeburg, Germany	4bp deletion	1bp deletion and SNPs
MGAS1392	M3	1972	Leipzig, Germany	4bp deletion	1bp deletion and SNPs
MGAS1404	M3	1973	Madgeburg, Germany	4bp deletion	1bp deletion and SNPs
MGAS1428	M3	1974	Cottbus, Germany	4bp deletion	1bp deletion and SNPs
MGAS1308	M3	1981	Schwerin, Germany	4bp deletion	1bp deletion and SNPs
MGAS1319	M3	1982	Chemnitz, Germany	4bp deletion	1bp deletion and SNPs
MGAS1344	M3	1983	Rostock, Germany	4bp deletion	1bp deletion and SNPs
MGAS1519	M3	1987	Moscow, Russia	4bp deletion	1bp deletion and SNPs
MGAS315	M3	1980s	Texas, USA	4bp deletion	1bp deletion and SNPs
MGAS157	M3	Late 1980s	Minnesota, USA	4bp deletion	1bp deletion and SNPs
MGAS159	M3	Late 1980s	Utah, USA	4bp deletion	1bp deletion and SNPs
MGAS1610	M3	Late 1980s	USA	4bp deletion	1bp deletion and SNPs
MGAS1638	M3	Late 1980s	USA	4bp deletion	1bp deletion and SNPs
MGAS491	M3	Pre-1991	UK	4bp deletion	1bp deletion and SNPs
MGAS3370	M3	1992	Ontario, Canada	4bp deletion	1bp deletion and SNPs
MGAS3664	M3	1992	Ontario, Canada	4bp deletion	1bp deletion and SNPs
MGAS10051	M3	1993	Ontario, Canada	4bp deletion	1bp deletion and SNPs
SSI-1	M3	1994	Japan	4bp deletion	1bp deletion and SNPs
MGAS3374	M3	1994	Ontario, Canada	4bp deletion	1bp deletion and SNPs
MGAS3376	M3	1994	Ontario, Canada	4bp deletion	1bp deletion and SNPs
MGAS3378	M3	1994	Ontario, Canada	4bp deletion	1bp deletion and SNPs
MGAS3382	M3	1994	Ontario, Canada	4bp deletion	1bp deletion and SNPs
MGAS10002	M3	1994	Ontario, Canada	4bp deletion	1bp deletion and SNPs
MGAS10003	M3	1994	Ontario, Canada	4bp deletion	1bp deletion and SNPs
MGAS10006	M3	1994	Ontario, Canada	4bp deletion	1bp deletion and SNPs
MGAS10738	M3	1994	Ontario, Canada	4bp deletion	1bp deletion and SNPs
MGAS3318	M3	1995	Minnesota, USA	4bp deletion	1bp deletion and SNPs
MGAS3385	M3	1995	Ontario, Canada	4bp deletion	1bp deletion and SNPs
MGAS3392	M3	1995	Ontario, Canada	4bp deletion	1bp deletion and SNPs
MGAS3394	M3	1995	Ontario, Canada	4bp deletion	1bp deletion and SNPs
MGAS3397	M3	1995	Ontario, Canada	4bp deletion	1bp deletion and SNPs
MGAS3452	M3	1995	Ontario, Canada	4bp deletion	1bp deletion and SNPs
MGAS3475	M3	1995	Ontario, Canada	4bp deletion	1bp deletion and SNPs
MGAS10021	M3	1995	Ontario, Canada	4bp deletion	1bp deletion and SNPs
MGAS10024	M3	1995	Ontario, Canada	4bp deletion	1bp deletion and SNPs
MGAS10025	M3	1995	Ontario, Canada	4bp deletion	1bp deletion and SNPs
MGAS10029	M3	1995	Ontario, Canada	4bp deletion	1bp deletion and SNPs
MGAS10742	M3	1995	Ontario, Canada	4bp deletion	1bp deletion and SNPs
MGAS10041	M3	1996	Ontario, Canada	4bp deletion	1bp deletion and SNPs
MGAS10044	M3	1996	Ontario, Canada	4bp deletion	1bp deletion and SNPs

MGAS10048	M3	1996	Ontario, Canada	4bp deletion	1bp deletion and SNPs
MGAS6147	M3	1998	Texas, USA	4bp deletion	1bp deletion and SNPs
MGAS6165	M3	1998	Texas, USA	4bp deletion	1bp deletion and SNPs
MGAS6740	M3	1998	Texas, USA	4bp deletion	1bp deletion and SNPs
MGAS7630	M3	1998	Illinois, USA	4bp deletion	1bp deletion and SNPs
MGAS9056	M3	1998	Illinois, USA	4bp deletion	1bp deletion and SNPs
MGAS9978	M3	1998	Ontario, Canada	4bp deletion	1bp deletion and SNPs
MGAS9982	M3	1999	Ontario, Canada	4bp deletion	1bp deletion and SNPs
MGAS9983	M3	1999	Ontario, Canada	4bp deletion	1bp deletion and SNPs
MGAS9986	M3	1999	Ontario, Canada	4bp deletion	1bp deletion and SNPs
MGAS9990	M3	1999	Ontario, Canada	4bp deletion	1bp deletion and SNPs
MGAS9881	M3	2000	Ontario, Canada	4bp deletion	1bp deletion and SNPs
MGAS9884	M3	2000	Ontario, Canada	4bp deletion	1bp deletion and SNPs
MGAS9887	M3	2000	Ontario, Canada	4bp deletion	1bp deletion and SNPs
MGAS9892	M3	2000	Ontario, Canada	4bp deletion	1bp deletion and SNPs
MGAS9893	M3	2000	Ontario, Canada	4bp deletion	1bp deletion and SNPs
MGAS9897	M3	2000	Ontario, Canada	4bp deletion	1bp deletion and SNPs
MGAS9901	M3	2000	Ontario, Canada	4bp deletion	1bp deletion and SNPs
MGAS9904	M3	2000	Ontario, Canada	4bp deletion	1bp deletion and SNPs
MGAS9908	M3	2000	Ontario, Canada	4bp deletion	1bp deletion and SNPs
MGAS9911	M3	2000	Ontario, Canada	4bp deletion	1bp deletion and SNPs
MGAS9913	M3	2000	Ontario, Canada	4bp deletion	1bp deletion and SNPs
MGAS9917	M3	2000	Ontario, Canada	4bp deletion	1bp deletion and SNPs
MGAS9919	M3	2000	Ontario, Canada	4bp deletion	1bp deletion and SNPs
MGAS9921	M3	2000	Ontario, Canada	4bp deletion	1bp deletion and SNPs
MGAS9926	M3	2000	Ontario, Canada	4bp deletion	1bp deletion and SNPs
MGAS9930	M3	2000	Ontario, Canada	4bp deletion	1bp deletion and SNPs
MGAS9934	M3	2000	Ontario, Canada	4bp deletion	1bp deletion and SNPs
MGAS9937	M3	2000	Ontario, Canada	4bp deletion	1bp deletion and SNPs
MGAS9941	M3	2000	Ontario, Canada	4bp deletion	1bp deletion and SNPs
MGAS9945	M3	2000	Ontario, Canada	4bp deletion	1bp deletion and SNPs
MGAS9955	M3	2000	Ontario, Canada	4bp deletion	1bp deletion and SNPs
MGAS9958	M3	2000	Ontario, Canada	4bp deletion	1bp deletion and SNPs
MGAS9959	M3	2000	Ontario, Canada	4bp deletion	1bp deletion and SNPs
MGAS9967	M3	2000	Ontario, Canada	4bp deletion	1bp deletion and SNPs
MGAS9969	M3	2000	Ontario, Canada	4bp deletion	1bp deletion and SNPs
MGAS9973	M3	2000	Ontario, Canada	4bp deletion	1bp deletion and SNPs
MGAS10398	M3	2000	Ontario, Canada	4bp deletion	1bp deletion and SNPs
MGAS9497	M3	2001	Texas, USA	4bp deletion	1bp deletion and SNPs
MGAS9507	M3	2001	Texas, USA	4bp deletion	1bp deletion and SNPs
MGAS9681	M3	2001	Texas, USA	4bp deletion	1bp deletion and SNPs
MGAS10830	M3	2001	Ontario, Canada	4bp deletion	1bp deletion and SNPs
MGAS10834	M3	2001	Ontario, Canada	4bp deletion	1bp deletion and SNPs
MGAS10838	M3	2001	Ontario, Canada	4bp deletion	1bp deletion and SNPs
MGAS10842	M3	2001	Ontario, Canada	4bp deletion	1bp deletion and SNPs
MGAS10846	M3	2001	Ontario, Canada	4bp deletion	1bp deletion and SNPs
MGAS10850	M3	2001	Ontario, Canada	4bp deletion	1bp deletion and SNPs
MGAS10854	M3	2001	Ontario, Canada	4bp deletion	1bp deletion and SNPs
MGAS10858	M3	2001	Ontario, Canada	4bp deletion	1bp deletion and SNPs
MGAS10863	M3	2001	Ontario, Canada	4bp deletion	1bp deletion and SNPs
MGAS10866	M3	2001	Ontario, Canada	4bp deletion	1bp deletion and SNPs
MGAS10870	M3	2002	Ontario, Canada	4bp deletion	1bp deletion and SNPs
MGAS10874	M3	2002	Ontario, Canada	4bp deletion	1bp deletion and SNPs
MGAS15001	M3	2003	Ontario, Canada	4bp deletion	1bp deletion and SNPs
MGAS15005	M3	2003	Ontario, Canada	4bp deletion	1bp deletion and SNPs

MGAS15009	M3	2004	Ontario, Canada	4bp deletion	1bp deletion and SNPs
MGAS15013	M3	2005	Ontario, Canada	4bp deletion	1bp deletion and SNPs
MGAS15017	M3	2005	Ontario, Canada	4bp deletion	1bp deletion and SNPs
MGAS15021	M3	2005	Ontario, Canada	4bp deletion	1bp deletion and SNPs
MGAS15025	M3	2005	Ontario, Canada	4bp deletion	1bp deletion and SNPs
MGAS15027	M3	2005	Ontario, Canada	4bp deletion	1bp deletion and SNPs
MGAS15028	M3	2005	Ontario, Canada	4bp deletion	1bp deletion and SNPs
MGAS15029	M3	2005	Ontario, Canada	4bp deletion	1bp deletion and SNPs
MGAS15034	M3	2005	Ontario, Canada	4bp deletion	1bp deletion and SNPs
MGAS15035	M3	2005	Ontario, Canada	4bp deletion	1bp deletion and SNPs
MGAS15040	M3	2005	Ontario, Canada	4bp deletion	1bp deletion and SNPs
MGAS15043	M3	2005	Ontario, Canada	4bp deletion	1bp deletion and SNPs
MGAS15045	M3	2006	Ontario, Canada	4bp deletion	1bp deletion and SNPs
MGAS15049	M3	2006	Ontario, Canada	4bp deletion	1bp deletion and SNPs
MGAS15051	M3	2006	Ontario, Canada	4bp deletion	1bp deletion and SNPs
MGAS15053	M3	2006	Ontario, Canada	4bp deletion	1bp deletion and SNPs
MGAS15057	M3	2006	Ontario, Canada	4bp deletion	1bp deletion and SNPs
MGAS15058	M3	2006	Ontario, Canada	4bp deletion	1bp deletion and SNPs
MGAS15061	M3	2006	Ontario, Canada	4bp deletion	1bp deletion and SNPs
MGAS15184	M3	2006	Ontario, Canada	4bp deletion	1bp deletion and SNPs
MGAS15188	M3	2007	Ontario, Canada	4bp deletion	1bp deletion and SNPs
MGAS15192	M3	2007	Ontario, Canada	4bp deletion	1bp deletion and SNPs
MGAS15196	M3	2007	Ontario, Canada	4bp deletion	1bp deletion and SNPs
MGAS15200	M3	2007	Ontario, Canada	4bp deletion	1bp deletion and SNPs
MGAS22283	M3	2010	Alberta, Canada	4bp deletion	1bp deletion and SNPs
MGAS22440	M3	2010	Alberta, Canada	4bp deletion	1bp deletion and SNPs

Table S2
Clinical GAS isolates used in this study.