

Supplementary Material

Coiled-coil irregularities of the M1 protein structure promote M1-fibrinogen interaction and influence group A *Streptococcus* host cell interactions and virulence

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Materials and methods Supplement

Bacterial growth curves

Overnight cultures were diluted to OD₆₀₀ 0.15 in THB, grown at 37°C in a static incubator to mid-log phase and diluted again to an OD₆₀₀ of 0.05 in THB, at which point growth assessment was started. Cell growth was measured by assessment of the OD₆₀₀ every 30 minutes.

DNase activity measurement

The DNase activity was tested as previously described [1].

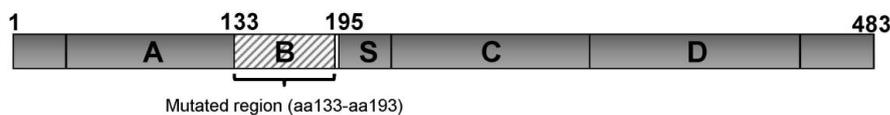
SLO activity measurement

The SLO activity of mid-logarithmic phase supernatants was measured using a haemolysis assay as described [2]. Haemolytic activity was quantified as follows: 100% haemolysis was reached by incubating red blood cells in deionised water. The reciprocal of the highest dilution of the supernatants that resulted in 50% or more haemolysis was used to quantify SLO activity.

Supplemental Figures

S 1

A Scheme of M* protein



B

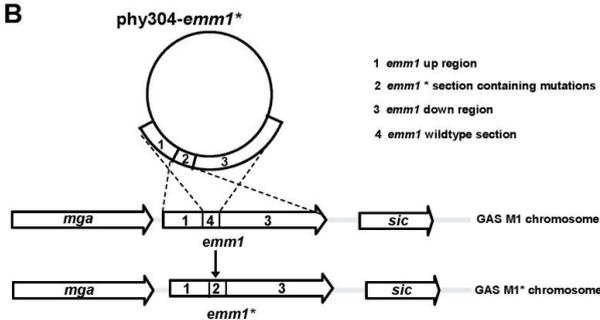


Fig S1. Scheme of the M1* protein domains with position of the mutations introduced in the B domain and schematic drawing for precise in-frame allelic replacement of the *emm1* gene by *emm1 in M1 GAS**

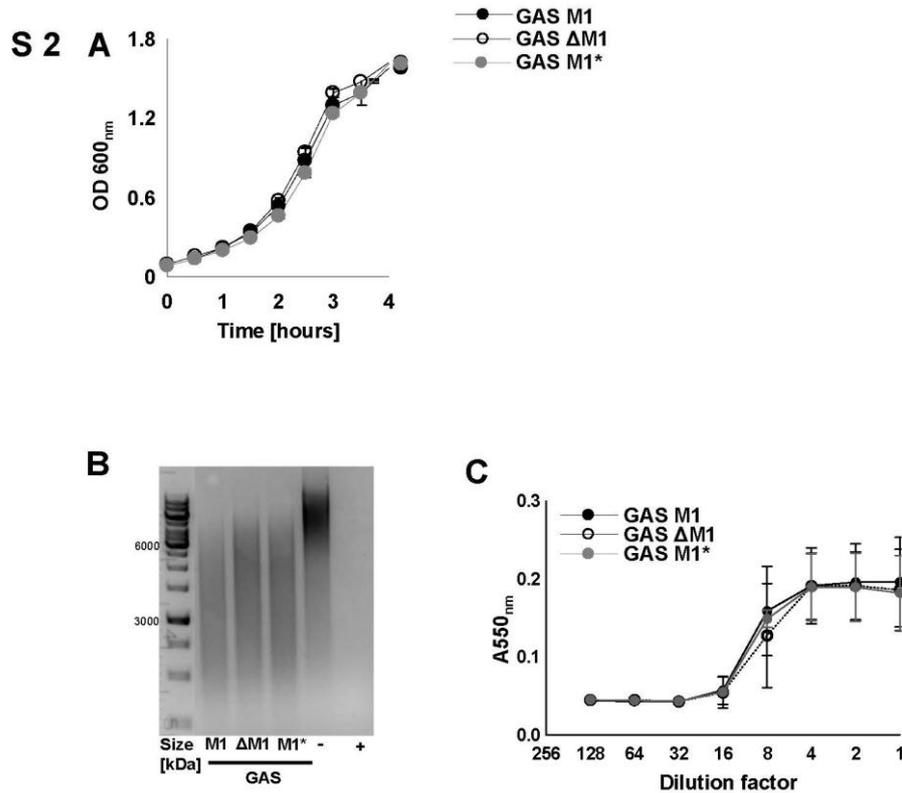


Fig S2. Characterization of the GAS M1* strain. (A) Bacterial growth curves were performed over 4 hours for GAS M1, Δ M1 and M1* strains. (B) GAS DNase activity was assessed by agarose gel electrophoresis. One representative experiment out of 3 independent experiments is shown. (C) SLO activity was quantified by measuring human red blood cell hemolysis, data were pooled (means \pm SD) from three independent experiments each done in duplicate.

References

- Buchanan JT, Simpson AJ, Aziz RK, Liu GY, Kristian SA, Kotb M, Feramisco J, Nizet V (2006) DNase expression allows the pathogen group A Streptococcus to escape killing in neutrophil extracellular traps. *Curr Biol* 16: 396-400. DOI S0960-9822(06)01021-9 [pii] 10.1016/j.cub.2005.12.039
- Ruiz N, Wang B, Pentland A, Caparon M (1998) Streptolysin O and adherence synergistically modulate proinflammatory responses of keratinocytes to group A streptococci. *Mol Microbiol* 27: 337-346