

CLAIMS

1. An antibody or antibody fragment that binds or is raised against a group A streptococcus M protein, fragment, variant or derivative thereof and/or an antibody or antibody fragment that binds or is raised against a group A streptococcus superantigen protein, fragment, variant or derivative thereof, for use to passively immunize against, treat or prevent a group A streptococcus-associated disease disorder or condition in a mammal, preferably an invasive group A streptococcus disease (iGAS) such as streptococcal toxic shock syndrome (STSS).
- 10 2. A group A streptococcus M protein, fragment, variant or derivative thereof and/or a group A streptococcus superantigen protein, fragment, variant or derivative thereof, for use to immunize against, treat or prevent a group A streptococcus-associated disease disorder or condition in a mammal, preferably an invasive group A streptococcus disease (iGAS) such as streptococcal toxic shock syndrome (STSS).
- 15 3. A method of passively immunizing a mammal against streptococcal toxic shock syndrome, said method including the step of administering to the mammal: an antibody or antibody fragment that binds, or is raised against, a group A streptococcus M protein, fragment, variant or derivative thereof, to thereby passively immunize the mammal against streptococcal toxic shock syndrome in the mammal.
- 20 4. The method of Claim 3, further including the step of administering an antibody or antibody fragment that binds, or is raised against, a group A streptococcus superantigen protein, fragment, variant or derivative thereof.
- 25 5. A method of treating or preventing streptococcal toxic shock syndrome in a mammal, said method including the step of administering to the mammal: a group A streptococcus M protein, fragment, variant or derivative thereof and/or an antibody or antibody fragment that binds, or is raised against, a group A streptococcus M protein, fragment, variant or derivative thereof, to thereby treat or prevent streptococcal toxic shock syndrome in the mammal.
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6. The method of Claim 5, further including the step of administering a group A streptococcus superantigen protein, fragment, variant or derivative thereof and/or an antibody or antibody fragment that binds, or is raised against, a group A streptococcus superantigen protein, fragment, variant or derivative thereof.

7. A composition suitable for administration to a mammal, said composition comprising: an antibody or antibody fragment that binds, or is raised against, a group A streptococcus M protein, fragment, variant or derivative thereof.

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8. The composition of Claim 7, further comprising an antibody or antibody fragment that binds, or is raised against, a group A streptococcus superantigen protein, fragment, variant or derivative thereof.

9. A composition suitable for administration to a mammal, said composition comprising: a group A streptococcus M protein, fragment, variant or derivative thereof and a group A streptococcus superantigen protein, fragment, variant or derivative thereof.

10. The use of Claim 1 or Claim 2, the method of any one of Claims 2 to 6 or the composition of any one of Claims 7 to 9, wherein the M protein fragment is or comprises a conserved region of the M protein.

11. The use, method or composition of Claim 10, wherein the M protein fragment is, comprises, or is contained within a p145 peptide.

12. The use, method or composition of Claim 11, wherein the M protein fragment is, comprises, or is contained within a J8 peptide, fragment, variant or derivative thereof.

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13. The use, method or composition of Claim 11, wherein the M protein fragment is, comprises, or is contained within a p17 peptide, fragment, variant or derivative thereof.

14. The use, method or composition of any preceding claim wherein the superantigen is streptococcal pyrogenic exotoxin (Spe) A or SpeC.

15. The use, method or composition of any preceding claim wherein the antibody or antibody fragment that binds, or is raised against, a group A streptococcus M protein, fragment, variant or derivative thereof; and/or the antibody or antibody fragment that binds, or is raised against, a group A streptococcus superantigen protein, fragment, variant or derivative thereof is a monoclonal antibody or antibody fragment.

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16. The use, method or composition of any preceding claim wherein the antibody or antibody fragment that binds, or is raised against, a group A streptococcus M protein, fragment, variant or derivative thereof; and/or the antibody or antibody fragment that binds, or is raised against, a group A streptococcus superantigen protein, fragment, variant or derivative is a humanized monoclonal antibody or antibody fragment.

17. The use, method or composition of any preceding claim, wherein the mammal is a human.

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18. A monoclonal antibody or fragment thereof which binds, or is raised against, a group A streptococcus M protein, fragment, variant or derivative thereof.

19. A monoclonal antibody or fragment thereof which binds, or is raised against; or an antibody or antibody fragment that binds, or is raised against, a group A streptococcus superantigen protein, fragment, variant or derivative thereof.

20. The monoclonal antibody or fragment thereof of Claim 18 or Claim 19, which is a recombinant antibody or antibody fragment.

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21. The monoclonal antibody or fragment thereof of Claim 20, which is humanized.

22. An isolated nucleic acid encoding the recombinant monoclonal antibody or fragment thereof of any one of Claims 18 to 21.
23. A genetic construct comprising the isolated nucleic acid of Claim 22.
24. A host cell comprising the genetic construct of Claim 23.
25. A composition comprising: (i) the antibodies or antibody fragments of any one of Claims 18 to 21; (ii) the isolated nucleic acid of Claim 22; (iii) the genetic construct of Claim 23; and/or (iv) the host cell of Claim 24.