CLAIMS

What is claimed is:

1. Use of an antibody or antigen-binding fragment which binds specifically to transmembrane protease serine S1 member 2 (TMPRSS2) but does not substantially inhibit the protease activity of any other type II transmembrane serine protease (TTSP) in the preparation of a pharmaceutical composition for preventing or reducing the accumulation of influenza-infected alveolar macrophages, influenza-infected neutrophils and/or influenza-infected epithelial cells in the lungs of a subject that has been exposed to or challenged with influenza virus.

2. Use according to claim 1, wherein the pharmaceutical composition is formulated for systemic administration.

3. Use according to claim 2, wherein the pharmaceutical composition is formulated for subcutaneous administration.

4. Use according to claim 2, wherein the pharmaceutical composition is formulated for intravenous administration.

5. Use according to any one of claims 2 to 4, wherein the pharmaceutical composition further comprises a second therapeutic agent.

6. Use according to claim 5, wherein the second therapeutic agent is an antiviral agent.

7. Use according to claim 6, wherein the antiviral agent is selected from the group consisting of amantadine, rimantadine, oseltamivir, and zanamivir.

8. Use according to claim 5, wherein the second therapeutic agent is an influenza virus vaccine.

9. Use according to claim 5, wherein the second therapeutic agent is an anti-influenza antibody.

10. Use according to claim 9, wherein the anti-influenza antibody is an antibody that specifically binds hemagglutinin (HA).

11. Use of an antibody or antigen-binding fragment which binds specifically to transmembrane protease serine S1 member 2 (TMPRSS2) but does not substantially inhibit the protease activity of any other type II transmembrane serine protease (TTSP) in the preparation of a pharmaceutical composition for preventing or reducing the accumulation of influenza-infected alveolar macrophages, influenza-infected neutrophils and/or influenza-infected epithelial cells in the lungs of a subject that has been exposed to or challenged with H1N1 influenza virus.

12. Use according to claim 11, wherein the pharmaceutical composition is formulated for systemic administration.

13. Use according to claim 12, wherein the pharmaceutical composition is formulated for subcutaneous administration.

14. Use according to claim 12, wherein the pharmaceutical composition is formulated for intravenous administration.

15. Use according to any one of claims 12 to 14, wherein the pharmaceutical composition further comprises a second therapeutic agent.

16. Use according to claim 15, wherein the second therapeutic agent is an antiviral agent.

17. Use according to claim 16, wherein the antiviral agent is selected from the group consisting of amantadine, rimantadine, oseltamivir, and zanamivir.

18. Use according to claim 15, wherein the second therapeutic agent is an influenza virus vaccine.

19. Use according to claim 15, wherein the second therapeutic agent is an anti-influenza antibody.

20. Use according to claim 19, wherein the anti-influenza antibody is an antibody that specifically binds hemagglutinin (HA).

CLAIMS

What is claimed is:

1. Use of an antibody or antigen-binding fragment which binds specifically to transmembrane protease serine S1 member 2 (TMPRSS2) but does not substantially inhibit the protease activity of any other type II transmembrane serine protease (TTSP) in the preparation of a pharmaceutical composition for preventing or reducing the accumulation of influenza-infected alveolar macrophages, influenza-infected neutrophils and/or influenza-infected epithelial cells in the lungs of a subject that has been exposed to or challenged with H1N1 influenza virus.

2. Use of an antibody or antigen-binding fragment which binds specifically to transmembrane protease serine S1 member 2 (TMPRSS2) but does not substantially inhibit the protease activity of any other type II transmembrane serine protease (TTSP) in the preparation of a pharmaceutical composition according to claim 1, wherein the pharmaceutical composition is formulated for systemic administration.

3. Use of an antibody or antigen-binding fragment which binds specifically to transmembrane protease serine S1 member 2 (TMPRSS2) but does not substantially inhibit the protease activity of any other type II transmembrane serine protease (TTSP) in the preparation of a pharmaceutical composition according to claim 2, wherein the pharmaceutical composition is formulated for subcutaneous administration.

4. Use of an antibody or antigen-binding fragment which binds specifically to transmembrane protease serine S1 member 2 (TMPRSS2) but does not substantially inhibit the protease activity of any other type II transmembrane serine protease (TTSP) in the preparation of a pharmaceutical composition according to claim 2, wherein the pharmaceutical composition is formulated for intravenous administration.

5. Use of an antibody or antigen-binding fragment which binds specifically to transmembrane protease serine S1 member 2 (TMPRSS2) but does not substantially inhibit the protease activity of any other type II transmembrane serine protease (TTSP) in the preparation of a pharmaceutical composition according to any one of claims 2 to 4, further comprising a second therapeutic agent.

6. Use of an antibody or antigen-binding fragment which binds specifically to transmembrane protease serine S1 member 2 (TMPRSS2) but does not substantially inhibit the protease activity of any other type II transmembrane serine protease (TTSP) in the preparation of a pharmaceutical composition according to claim 5, wherein the second therapeutic agent is an antiviral agent.

7. Use of an antibody or antigen-binding fragment which binds specifically to transmembrane protease serine S1 member 2 (TMPRSS2) but does not substantially inhibit the protease activity of any other type II transmembrane serine protease (TTSP) in the preparation of a pharmaceutical composition according to claim 6, wherein the antiviral agent is selected from the group consisting of amantadine, rimantadine, oseltamivir, and zanamivir.

8. Use of an antibody or antigen-binding fragment which binds specifically to transmembrane protease serine S1 member 2 (TMPRSS2) but does not substantially inhibit the protease activity of any other type II transmembrane serine protease (TTSP) in the preparation of a pharmaceutical composition according to claim 5, wherein the second therapeutic agent is an influenza virus vaccine.

9. Use of an antibody or antigen-binding fragment which binds specifically to transmembrane protease serine S1 member 2 (TMPRSS2) but does not substantially inhibit the protease activity of any other type II transmembrane serine protease (TTSP) in the preparation of a pharmaceutical composition according to claim 5, wherein the second therapeutic agent is an anti-influenza antibody.

10. Use of an antibody or antigen-binding fragment which binds specifically to transmembrane protease serine S1 member 2 (TMPRSS2) but does not substantially inhibit the protease activity of any other type II transmembrane serine protease (TTSP) in the preparation of a pharmaceutical composition according to claim 9, wherein the anti-influenza antibody is an antibody that specifically binds hemagglutinin (HA).