The present disclosure provides a fully human anti-OprF antibody that binds to OprF, wherein said antibody comprises a heavy chain variable domain sequence comprising an amino acid sequence that is at least 95% identical to an amino acid sequences selected from the group consisting of SEQ ID NO. 7, SEQ ID NO. 3, and SEQ ID NO. 5, and comprises a light chain variable domain comprising an amino acid sequence that is at least 95% identical to an amino acid sequence selected from the group consisting of SEQ ID NO. 8, SEQ ID NO. 4, and SEQ ID NO. 6.

The present disclosure provides a fully human anti-OprF antibody, or an antigen-binding fragment thereof, that binds to OprF, comprising complementarity determining regions (CDRs) of a heavy chain variable domain amino acid sequence selected from the group consisting of SEQ ID NO. 7, SEQ ID NO. 3 and SEQ ID NO. 5; and comprising CDRs of a light chain variable domain amino acid sequence selected from the group consisting of SEQ ID NO. 8, SEQ ID NO. 4 and SEQ ID NO. 6.

The present disclosure provides a recombinant fully human anti-OprF antibody fragment that binds to OprF, wherein said fragment comprises a heavy chain variable domain comprising an amino acid sequence that is at least 95% identical to an amino acid sequence selected from the group consisting of SEQ ID NO. 7, SEQ ID NO. 3, and SEQ ID NO. 5, and a light chain variable domain comprising an amino acid sequence that is at least 95% identical to an amino acid sequence selected from the group consisting of SEQ ID NO. 8, SEQ ID NO. 4, and SEQ ID NO. 6.

The present disclosure provides a single chain anti-OprF antigen binding fragment that binds to OprF or, comprising a heavy chain variable domain comprising comprises an amino acid sequence that is at least 95% identical to an amino acid sequence selected from the group consisting of SEQ ID NO. 7, SEQ ID NO. 3, and SEQ ID NO. 5 and comprising a light chain variable domain comprising an amino acid sequence that is at least 95% identical to an amino acid sequence selected from the group consisting of SEQ ID NO. 8, SEQ ID NO. 4, and SEQ ID NO. 6, wherein the heavy chain variable domain and the light chain variable domain are connected by a peptide linker.

The present disclosure provides the use of the antibody or antigen binding fragment as described herein in the manufacture of a medicament for treating or preventing a Pseudomonas aeruginosa infection.

The present disclosure provides a pharmaceutical composition comprising the antibody or antigen binding fragment as described herein, and a pharmaceutically acceptable carrier.

The present disclosure provides a fully human antibody of an IgG class that binds to a OprF and OprI epitope with a binding affinity of at least 10^{-6}M, which has a heavy chain

variable domain sequence that is at least 95% identical to the amino acid sequences selected from the group consisting of SEQ ID NO. 1, SEQ ID NO. 3, SEQ ID NO. 5, SEQ ID NO. 6, SEQ ID NO. 7, SEQ ID NO. 9, SEQ ID NO. 11, SEQ ID NO. 13, SEQ ID NO. 15, SEQ ID NO. 17, SEQ ID NO. 19, SEQ ID NO. 21, SEQ ID NO. 23, SEQ ID NO. 25, SEQ ID NO. 27, SEQ ID NO. 29, SEQ ID NO. 31, SEQ ID NO. 33, SEQ ID NO. 35, SEQ ID NO. 37, SEQ ID NO. 39, SEQ ID NO. 41, SEQ ID NO. 43, SEQ ID NO. 45, SEQ ID NO. 47, SEQ ID NO. 49, SEQ ID NO. 51, SEQ ID NO. 53, SEQ ID NO. 55, SEQ ID NO. 57, SEQ ID NO. 59, SEQ ID NO. 61, SEQ ID NO. 63, SEQ ID NO. 65, SEQ ID NO. 67, SEQ ID NO. 69, SEQ ID NO. 71, SEQ ID NO. 73, SEQ ID NO. 75, SEQ ID NO. 77, SEQ ID NO. 79, SEQ ID NO. 81, SEQ ID NO. 83, SEQ ID NO. 85, SEQ ID NO. 87, SEQ ID NO. 89, SEQ ID NO. 91, SEQ ID NO. 93, SEQ ID NO. 95, SEQ ID NO. 97, SEQ ID NO. 99, SEQ ID NO. 101, SEQ ID NO. 103, SEQ ID NO. 105, SEQ ID NO. 107, SEQ ID NO. 109, SEQ ID NO. 111, SEQ ID NO. 113, SEQ ID NO. 115, SEQ ID NO. 117, SEQ ID NO. 119, SEQ ID NO. 121, SEQ ID NO. 123, SEQ ID NO. 125, SEQ ID NO. 127, SEQ ID NO. 129, SEQ ID NO. 131, SEQ ID NO. 133, SEQ ID NO. 135, SEQ ID NO. 137, SEQ ID NO. 139, SEQ ID NO. 141, and combinations thereof, and that has a light chain variable domain sequence that is at least 95% identical to the amino acid sequence consisting of SEQ ID NO. 2, SEQ ID NO. 4, SEQ ID NO. 6, SEQ ID NO. 8, SEQ ID NO. 10, SEQ ID NO. 12, SEQ ID NO. 14, SEQ ID NO. 16, SEQ ID NO. 18, SEQ ID NO. 20, SEQ ID NO. 22, SEQ ID NO. 24, SEQ ID NO. 26, SEQ ID NO. 28, SEQ ID NO. 30, SEQ ID NO. 32, SEQ ID NO. 34, SEQ ID NO. 36, SEQ ID NO. 38, SEQ ID NO. 40, SEQ ID NO. 42, SEQ ID NO. 44, SEQ ID NO. 46, SEQ ID NO. 48, SEQ ID NO. 50, SEQ ID NO. 52, SEQ ID NO. 54, SEQ ID NO. 56, SEQ ID NO. 58, SEQ ID NO. 60, SEQ ID NO. 62, SEQ ID NO. 64, SEQ ID NO. 66, SEQ ID NO. 68, SEQ ID NO. 70, SEQ ID NO. 72, SEQ ID NO. 74, SEQ ID NO. 76, SEQ ID NO. 78, SEQ ID NO. 80, SEQ ID NO. 82, SEQ ID NO. 84, SEQ ID NO. 86, SEQ ID NO. 88, SEQ ID NO. 90, SEQ ID NO. 92, SEQ ID NO. 94, SEQ ID NO. 96, SEQ ID NO. 98, SEQ ID NO. 100, SEQ ID NO. 102, SEQ ID NO. 104, SEQ ID NO. 106, SEQ ID NO. 108, SEQ ID NO. 110, SEQ ID NO. 112, SEQ ID NO. 114, SEQ ID NO. 116, SEQ ID NO. 118, SEQ ID NO. 120, SEQ ID NO. 122, SEQ ID NO. 124, SEQ ID NO. 126, SEQ ID NO. 128, SEQ ID NO. 130, SEQ ID NO. 132, SEQ ID NO. 134, SEQ ID NO. 136, SEQ ID NO. 138, SEQ ID NO. 140, SEQ ID NO. 142, and combinations thereof. Preferably, the fully human antibody has both a heavy chain and a light chain wherein the antibody has a heavy chain/light chain variable domain

We claim:

1. A fully human anti-OprF antibody that binds to OprF, wherein said antibody comprises a heavy chain variable domain sequence comprising an amino acid sequence that is at least 95% identical to an amino acid sequences selected from the group consisting of SEQ ID NO. 7, SEQ ID NO. 3, and SEQ ID NO. 5, and comprises a light chain variable domain comprising an amino acid sequence that is at least 95% identical to an amino acid sequence selected from the group consisting of SEQ ID NO. 8, SEQ ID NO. 4, and SEQ ID NO. 6.

2. The fully human anti-OprF antibody of claim 1, wherein the antibody has a binding affinity of at least 1 x 10^{-6} M.

3. The fully human anti-OprF antibody of claim 1, wherein the antibody has heavy chain/light chain variable domain sequences selected from the group consisting of SEQ ID NO. 7/SEQ ID NO. 8, SEQ ID NO. 3/SEQ ID NO. 4, and SEQ ID NO. 5/SEQ ID NO. 6.

4. A fully human anti-OprF antibody, or an antigen-binding fragment thereof, that binds to OprF, comprising complementarity determining regions (CDRs) of a heavy chain variable domain amino acid sequence selected from the group consisting of SEQ ID NO. 7, SEQ ID NO. 3 and SEQ ID NO. 5; and comprising CDRs of a light chain variable domain amino acid sequence selected from the group consisting of SEQ ID NO. 8, SEQ ID NO. 4 and SEQ ID NO. 6.

5. The fully human anti-OprF antibody, or antigen binding fragment thereof, of claim 4, comprising heavy/light chain variable domain sequences selected from the group consisting of SEQ ID NO. 7/SEQ ID NO. 8, SEQ ID NO. 3/SEQ ID NO. 4, and SEQ ID NO. 5/SEQ ID NO. 6.

6. The fully human anti-OprF antibody, or antigen-binding fragment thereof, of claim 4, wherein the antibody, or antigen binding fragment, has a binding affinity of at least 1 x 10^{-6} M.

7. A recombinant fully human anti-OprF antibody fragment that binds to OprF, wherein said fragment comprises

a heavy chain variable domain comprising an amino acid sequence that is at least 95% identical to an amino acid sequence selected from the group consisting of SEQ ID NO. 7, SEQ ID NO. 3, and SEQ ID NO. 5, and a light chain variable domain comprising an amino acid sequence that is at least 95% identical to an amino acid sequence selected from the group consisting of SEQ ID NO. 8, SEQ ID NO. 4, and SEQ ID NO. 6.

8. The recombinant fully human anti-OprF antibody fragment of claim 7, wherein the fragment comprises heavy chain/light chain variable domain sequences selected from the group consisting of SEQ ID NO.7/ SEQ ID NO.8, SEQ ID NO. 3/SEQ ID NO. 4, and SEQ ID NO. 5/SEQ ID NO. 6.

9. The recombinant fully human anti-OprF antibody fragment of claim 7, wherein the antibody fragment has a binding affinity of at least 1 x 10^{-6} M.

10. A single chain anti-OprF antigen binding fragment that binds to OprF or, comprising a heavy chain variable domain comprising comprises an amino acid sequence that is at least 95% identical to an amino acid sequence selected from the group consisting of SEQ ID NO. 7, SEQ ID NO. 3, and SEQ ID NO. 5 and comprising a light chain variable domain comprising an amino acid sequence that is at least 95% identical to an amino acid sequence selected from the group consisting of SEQ ID NO. 8, SEQ ID NO. 4, and SEQ ID NO. 6,

wherein the heavy chain variable domain and the light chain variable domain are connected by a peptide linker.

11. The single chain anti-OprF antigen binding fragment of claim 10, comprising heavy chain/light chain variable domain sequences selected from the group consisting of SEQ ID NO. 7/ SEQ ID NO. 8, SEQ ID NO. 3/SEQ ID NO. 4, and SEQ ID NO. 5/SEQ ID NO. 6.

12. The single chain anti-OprF antigen binding fragment of claim 10, wherein the fragment has a binding affinity of at least 1 x 10^{-6} M.

13. Use of the antibody or antigen binding fragment of any one of claims 1-12 in the manufacture of a medicament for treating or preventing a Pseudomonas aeruginosa infection.

14. The antibody or antigen binding fragment of claim 13, wherein the subject further has a disease selected from the group consisting of burns, surgical site infections, diabetic foot ulcers, infected wounds, and cystic fibrosis.

15. A pharmaceutical composition comprising the antibody or antigen binding fragment of any one of claims 1-12, and a pharmaceutically acceptable carrier.

16. The fully human anti-OprF antibody of claim 1, wherein the antibody is classified as an isotype selected from the group consisting of: IgG, IgM, IgD, IgA, and IgE.

17. The fully human anti-OprF antibody of claim 16, wherein the antibody is an IgG1 or an IgG4.

18. The fully human anti-OprF antibody, or antigen binding fragment thereof, of claim 4, wherein the antibody, or antigen-binding fragment thereof, is classified as an isotype selected from the group consisting of: IgG, IgM, IgD, IgA, and IgE.

19. The fully human anti-OprF antibody, or antigen binding fragment thereof, of claim 18, wherein the antibody, or antigen binding fragment, is an IgG1 or an IgG4.

20. The recombinant fully human anti-OprF antibody fragment of claim 7, wherein the fragment is classified as an isotype selected from the group consisting of: IgG, IgM, IgD, IgA, and IgE.

21. The recombinant fully human anti-OprF antibody fragment of claim 20, wherein the fragment is an IgG1 or an IgG4.

22. The anti-OprF antibody or antigen binding fragment of any one of claims 1-12, wherein the antibody, or antigen-binding fragment is an Fab, an Fab', an F(ab')2, an Fv, a domain antibody (dAb), a single-chain antibody (scFv), a diabody, a triabody or a tetrabody.

23. The recombinant anti-OprF antibody fragment of claim 7, wherein the fragment is selected from the group consisting of a Fab, a Fab', a F(ab')2, an Fv, a domain antibody, and a single-chain antibody.