1. A binding moiety which binds to a conformational epitope formed by amino acid sequences NDETCEQRA (SEQ ID NO: 2) and SHKDMQL (SEQ ID NO: 3) of C5a, wherein the binding moiety binds to at least one amino acid within the amino acid sequence according to SEQ ID NO: 2 and to at least one amino acid within the amino acid sequence according to SEQ ID NO: 3;
wherein said binding moiety has a binding constant to C5a with a Kd value of 100 nM or less;
wherein said binding moiety is selected from the group consisting of:
   (a) antibodies or antigen-binding fragments thereof; and
   (b) antibody-like proteins.

2. The binding moiety of claim 1, wherein the binding moiety binds to at least one amino acid of an amino acid sequence according to DETCEQR (SEQ ID NO: 4).

3. The binding moiety of claim 1 or 2, wherein the binding moiety binds to at least one amino acid of an amino acid sequence according to HKDMQ (SEQ ID NO: 5), preferably KDM.

4 The binding moiety of any one of claims 1 to 3, wherein said binding moiety exhibits one or more of the following properties:
- said binding moiety has a binding constant to C5a with a K_d value of 10 nM or less;
- one binding moiety exhibits at least 80% blocking activity for biological effects induced by one molecule C5a;
- said binding moiety does not inhibit CH50 activity in human plasma;
- said binding moiety is capable of reducing *E. coli* induced IL-8 production in human whole blood.

5. The binding moiety of any one of claims 1 to 4, wherein the binding moiety is an antibody or an antigen-binding fragment thereof, said antibody being selected from the group consisting of polyclonal antibodies, monoclonal antibodies, chimeric antibodies, humanized antibodies, and human antibodies.

6. The binding moiety of any one of claims 1 to 4, wherein the binding moiety is an antigen-binding fragment of an antibody, said fragment being selected from the group consisting of Fab fragments, Fab' fragments, $F(ab')_2$ fragments, Fd fragments, Fv fragments, disulfide-linked Fvs (dsFv), single domain antibodies and single chain Fv (scFv) antibodies.

7. An antibody or an antigen-binding fragment thereof comprising:

(i) a heavy chain CDR3 sequence as set forth in SEQ ID NO: 6; or

(ii) a heavy chain CDR3 sequence as set forth in SEQ ID NO: 7;

wherein the heavy chain CDR3 sequence optionally comprises 1, 2 or 3 amino acid exchanges, 1, 2, or 3 amino acid deletions and/or 1, 2, or 3 amino acid additions,

further comprising at least one of the following sequences:

(i) a heavy chain CDR2 sequence according to SEQ ID NO: 10;

(ii) a heavy chain CDR2 sequence according to SEQ ID NO: 11;

(iii) a light chain CDR2 sequence according to SEQ ID NO: 12;

(iv) a light chain CDR2 sequence according to SEQ ID NO: 13;

(v) a heavy chain CDR1 sequence according to SEQ ID NO: 14;

(vi) a heavy chain CDR1 sequence according to SEQ ID NO: 15;

(vii) a light chain CDR1 sequence according to SEQ ID NO: 16; or

(viii) a light chain CDR1 sequence according to SEQ ID NO: 17;

wherein the heavy chain CDR2 sequence optionally comprises 1, 2 or 3 amino acid exchanges, 1, 2, or 3 amino acid deletions and/or 1, 2, or 3 amino acid additions;

wherein the light chain CDR2 sequence optionally comprises 1, 2 or 3 amino acid exchanges, 1, 2, or 3 amino acid deletions and/or 1, 2, or 3 amino acid additions;

wherein the heavy chain CDR1 sequence optionally comprises 1, 2 or 3 amino acid exchanges, 1, 2, or 3 amino acid deletions and/or 1, 2, or 3 amino acid additions;

wherein the light chain CDR1 sequence optionally comprises 1, 2 or 3 amino acid exchanges, 1, 2, or 3 amino acid deletions and/or 1, 2, or 3 amino acid additions;

wherein the antibody or antigen-binding fragment thereof binds to a conformational epitope formed by amino acid sequences NDETCEQRA (SEQ ID NO: 2) and SHKDMQL (SEQ ID NO: 3) of C5a;

wherein the antibody or antigen-binding fragment thereof binds to at least one amino acid within the amino acid sequence according to SEQ ID NO: 2 and to at least one amino acid within the amino acid sequence according to SEQ ID NO: 3; and

wherein said antibody or antigen-binding fragment thereof has a binding constant to C5a with a Kd value of 100 nM or less.

8. The antibody or fragment thereof according to claim 7, further comprising:

(i) a light chain CDR3 sequence as set forth in SEQ ID NO: 8; or

(ii) a light chain CDR3 sequence as set forth in SEQ ID NO: 9;

wherein the light chain CDR3 sequence optionally comprises 1, 2 or 3 amino acid exchanges, 1, 2, or 3 amino acid deletions and/or 1, 2, or 3 amino acid additions.

9. An antibody or an antigen-binding fragment thereof comprising:

(i) a light chain CDR3 sequence as set forth in SEQ ID NO: 8; or

(ii) a light chain CDR3 sequence as set forth in SEQ ID NO: 9;

wherein the light chain CDR3 sequence optionally comprises 1, 2 or 3 amino acid exchanges, 1, 2, or 3 amino acid deletions and/or 1, 2, or 3 amino acid additions;

wherein the antibody or antigen-binding fragment thereof binds to a conformational epitope formed by amino acid sequences NDETCEQRA (SEQ ID NO: 2) and SHKDMQL (SEQ ID NO: 3) of C5a;

wherein the antibody or antigen-binding fragment thereof binds to at least one amino acid within the amino acid sequence according to SEQ ID NO: 2 and to at least one amino acid within the amino acid sequence according to SEQ ID NO: 3; and

wherein said antibody or antigen-binding fragment thereof has a binding constant to C5a with a Kd value of 100 nM or less.

10. The antibody or fragment thereof according to claim 9, further comprising at least one of the following sequences:

(i) a heavy chain CDR2 sequence according to SEQ ID NO: 10;

(ii) a heavy chain CDR2 sequence according to SEQ ID NO: 11;

(iii) a light chain CDR2 sequence according to SEQ ID NO: 12;

(iv) a light chain CDR2 sequence according to SEQ ID NO: 13;

(v) a heavy chain CDR1 sequence according to SEQ ID NO: 14;

(vi) a heavy chain CDR1 sequence according to SEQ ID NO: 15;

(vii) a light chain CDR1 sequence according to SEQ ID NO: 16; or

(viii) a light chain CDR1 sequence according to SEQ ID NO: 17;

wherein the heavy chain CDR2 sequence optionally comprises 1, 2 or 3 amino acid exchanges, 1, 2, or 3 amino acid deletions and/or 1, 2, or 3 amino acid additions;

wherein the light chain CDR2 sequence optionally comprises 1, 2 or 3 amino acid exchanges, 1, 2, or 3 amino acid deletions and/or 1, 2, or 3 amino acid additions;

wherein the heavy chain CDR1 sequence optionally comprises 1, 2 or 3 amino acid exchanges, 1, 2, or 3 amino acid deletions and/or 1, 2, or 3 amino acid additions;

wherein the light chain CDR1 sequence optionally comprises 1, 2 or 3 amino acid exchanges, 1, 2, or 3 amino acid deletions and/or 1, 2, or 3 amino acid additions.

11. An antibody or an antigen-binding fragment thereof comprising a set of heavy chain CDR3, heavy chain CDR2, and heavy chain CDR1 sequences selected from one of the following sets:

(i) a heavy chain CDR3 sequence according to SEQ ID NO: 6, a heavy chain CDR2 sequence according to SEQ ID NO: 10, and a heavy chain CDR1 sequence according to SEQ ID NO: 14;

(ii) a heavy chain CDR3 sequence according to SEQ ID NO: 6, a heavy chain CDR2 sequence according to SEQ ID NO: 10, and a heavy chain CDR1 sequence according to SEQ ID NO: 15;

(iii) a heavy chain CDR3 sequence according to SEQ ID NO: 6, a heavy chain CDR2 sequence according to SEQ ID NO: 11, and a heavy chain CDR1 sequence according to SEQ ID NO: 14;

(iv) a heavy chain CDR3 sequence according to SEQ ID NO: 6, a heavy chain CDR2 sequence according to SEQ ID NO: 11, and a heavy chain CDR1 sequence according to SEQ ID NO: 15;

(v) a heavy chain CDR3 sequence according to SEQ ID NO: 7, a heavy chain CDR2 sequence according to SEQ ID NO: 10, and a heavy chain CDR1 sequence according to SEQ ID NO: 14;

(vi) a heavy chain CDR3 sequence according to SEQ ID NO: 7, a heavy chain CDR2 sequence according to SEQ ID NO: 10, and a heavy chain CDR1 sequence according to SEQ ID NO: 15;

(vii) a heavy chain CDR3 sequence according to SEQ ID NO: 7, a heavy chain CDR2 sequence according to SEQ ID NO: 11, and a heavy chain CDR1 sequence according to SEQ ID NO: 14; or

(viii) a heavy chain CDR3 sequence according to SEQ ID NO: 7, a heavy chain CDR2 sequence according to SEQ ID NO: 11, and a heavy chain CDR1 sequence according to SEQ ID NO: 15;

wherein each heavy chain CDR3 sequence optionally comprises 1, 2 or 3 amino acid exchanges, 1, 2, or 3 amino acid deletions and/or 1, 2, or 3 amino acid additions;

wherein each heavy chain CDR2 sequence optionally comprises 1, 2 or 3 amino acid exchanges, 1, 2, or 3 amino acid deletions and/or 1, 2, or 3 amino acid additions; and

wherein each heavy chain CDR1 sequence optionally comprises 1, 2 or 3 amino acid exchanges, 1, 2, or 3 amino acid deletions and/or 1, 2, or 3 amino acid additions;

wherein the antibody or antigen-binding fragment thereof binds to a conformational epitope formed by amino acid sequences NDETCEQRA (SEQ ID NO: 2) and SHKDMQL (SEQ ID NO: 3) of C5a;

wherein the antibody or antigen-binding fragment thereof binds to at least one amino acid within the amino acid sequence according to SEQ ID NO: 2 and to at least one amino acid within the amino acid sequence according to SEQ ID NO: 3; and

wherein said antibody or antigen-binding fragment thereof has a binding constant to C5a with a Kd value of 100 nM or less.

12. An antibody or an antigen-binding fragment thereof comprising a set of light chain CDR3, light chain CDR2, and light chain CDR1 sequences selected from one of the following sets:

(i) a light chain CDR3 sequence according to SEQ ID NO: 8, a light chain CDR2 sequence according to SEQ ID NO: 12, and a light chain CDR1 sequence according to SEQ ID NO: 16;

(ii) a light chain CDR3 sequence according to SEQ ID NO: 8, a light chain CDR2 sequence according to SEQ ID NO: 12, and a light chain CDR1 sequence according to SEQ ID NO: 17;

(iii) a light chain CDR3 sequence according to SEQ ID NO: 9, a light chain CDR2 sequence according to SEQ ID NO: 12, and a light chain CDR1 sequence according to SEQ ID NO: 16; or

(iv) a light chain CDR3 sequence according to SEQ ID NO: 9, a light chain CDR2 sequence according to SEQ ID NO: 12, and a light chain CDR1 sequence according to SEQ ID NO: 17;

wherein each light chain CDR3 sequence optionally comprises 1, 2 or 3 amino acid exchanges, 1, 2, or 3 amino acid deletions and/or 1, 2, or 3 amino acid additions;

wherein each light chain CDR2 sequence optionally comprises 1, 2 or 3 amino acid exchanges, 1, 2, or 3 amino acid deletions and/or 1, 2, or 3 amino acid additions; and

wherein each light chain CDR1 sequence optionally comprises 1, 2 or 3 amino acid exchanges, 1, 2, or 3 amino acid deletions and/or 1, 2, or 3 amino acid additions;

wherein the antibody or antigen-binding fragment thereof binds to a conformational epitope formed by amino acid sequences NDETCEQRA (SEQ ID NO: 2) and SHKDMQL (SEQ ID NO: 3) of C5a;

wherein the antibody or antigen-binding fragment thereof binds to at least one amino acid within the amino acid sequence according to SEQ ID NO: 2 and to at least one amino acid within the amino acid sequence according to SEQ ID NO: 3; and

wherein said antibody or antigen-binding fragment thereof has a binding constant to C5a with a Kd value of 100 nM or less.

13. Pharmaceutical composition comprising

(a) the binding moiety according to any one of claims 1 to 6 or

(b) the antibody or antigen-binding fragment thereof according to any one of claims 7 to 12

and further comprising one or more pharmaceutically acceptable carriers, diluents, excipients, fillers, binders, lubricants, glidants, disintegrants, adsorbents, and/or preservatives.

14. Use of

(a) a binding moiety according to any one of claims 1 to 6 or

(b) an antibody or antigen-binding fragment thereof according to any one of claims 7 to 12

for the preparation of a pharmaceutical composition for the prevention and or treatment of various diseases involving acute inflammation such as systemic inflammatory response syndrome (SIRS), sepsis, severe sepsis, septic shock,

ischemia/reperfusion related injuries such as ischemic heart disease, acute lung injury, pneumonia, acute and chronic graft rejection in transplant patients, graft versus host reactions, as wells as diseases involving chronic types of inflammation such as renal glomerular diseases such as glomerulonephritis and other entities of renal failure, rheumatoid arthritis and similar auto-immune diseases such as Bechterew's disease, lupus-type diseases, inflammatory bowel disease, Crohn´s disease, tumor growth, or solid organ cancer.

CLAIMS

1. An isolated binding moiety which binds to a conformational epitope formed by amino acid sequences $X_1X_2ETCEX_3RX_4$ (SEQ ID NO: 18) and $X_5X_6KX_7X_8X_9L$ (SEQ ID NO: 19) of C5a,

wherein the binding moiety binds to at least one amino acid within the amino acid sequence according to SEQ ID NO: 18 and to at least one amino acid within the amino acid sequence according to SEQ ID NO: 19;

wherein

X_1 is selected from the group consisting of N, H, D, F, K, Y, and T;

X_2 is selected from the group consisting of D, L, Y, and H;

X_3 is selected from the group consisting of Q, E, and K;

X_4 is selected from the group consisting of A, V, and L;

X_5 is selected from the group consisting of S, H, P, and N;

X_6 is selected from the group consisting of H and N;

X_7 is selected from the group consisting of D, N, H, P, and G;

X_8 is selected from the group consisting of M, L, I, and V; and

X_9 is selected from the group consisting of Q, L, and I;

wherein said binding moiety is selected from the group consisting of:

(a) antibodies or antigen-binding fragments thereof;

(b) oligonucleotides;

(c) antibody-like proteins; and

(d) peptidomimetics.

2. The isolated binding moiety of claim 1, wherein the binding moiety binds to at least one amino acid of the amino acid sequence X_2ETCEX_3R (SEQ ID NO: 20),

wherein X_2 and X_3 are defined as in claim 1.

3. The isolated binding moiety of claims 1 or 2, wherein the binding moiety binds to at least one amino acid of the amino acid sequence $X_6KX_7X_8X_9$ (SEQ ID NO: 21), preferably KX_7X_8,

wherein X_6, X_7, X_8, and X_9 are defined as in claim 1.

4. The isolated binding moiety of claim 1, 2, or 3, wherein the conformational epitope is formed by

(a) amino acid sequences NDETCEQRA (SEQ ID NO: 2) and SHKDMQL (SEQ ID NO: 3) of C5a;

(b) amino acid sequences HDETCEQRA (SEQ ID NO: 22) and SHKDLQL (SEQ ID NO: 23) of C5a;

(c) amino acid sequences DDETCEERA (SEQ ID NO: 24) and SHKNIQL (SEQ ID NO: 25) of C5a;

(d) amino acid sequences DLETCEQRA (SEQ ID NO: 26) and SHKHIQL (SEQ ID NO: 27) of C5a;

(e) amino acid sequences DDETCEQRA (SEQ ID NO: 28) and HHKNMQL (SEQ ID NO: 29) of C5a;

(f) amino acid sequences FYETCEERV (SEQ ID NO: 30) and PHKPVQL (SEQ ID NO: 31) of C5a;

(g) amino acid sequences KYETCEQRV (SEQ ID NO: 32) and HHKGMLL (SEQ ID NO: 33) of C5a;

(h) amino acid sequences YDETCEQRA (SEQ ID NO: 34) and SNKPLQL (SEQ ID NO: 35) of C5a; or

(i) amino acid sequences THETCEKRL (SEQ ID NO: 36) and NHKPVIL (SEQ ID NO: 37) of C5a.

5. The isolated binding moiety of any one of claims 1 to 4, wherein the binding moiety binds to at least one amino acid of an amino acid sequence selected from the group consisting of

(a) DETCEQR (SEQ ID NO: 4);

(b) DETCEER (SEQ ID NO: 38);

(c) LETCEQR (SEQ ID NO: 39);

(e) YETCEER (SEQ ID NO: 40);

(f) YETCEQR (SEQ ID NO: 41); and

(g) HETCEKR (SEQ ID NO: 42).

6. The isolated binding moiety of any one of claims 1 to 5, wherein the binding moiety binds to at least one amino acid of an amino acid sequence selected from the group consisting of

(a) HKDMQ (SEQ ID NO: 5), preferably KDM;
(b) HKDLQ (SEQ ID NO: 43), preferably KDL;
(c) HKNIQ (SEQ ID NO: 44), preferably KNI;
(d) HKHIQ (SEQ ID NO: 45), preferably KHI;
(e) HKNMQ (SEQ ID NO: 46), preferably KNM;
(f) HKPVQ (SEQ ID NO: 47), preferably KPV;
(g) HKGML (SEQ ID NO: 48), preferably KGM;
(h) NKPLQ (SEQ ID NO: 49), preferably KPL; and
(i) HKPVI (SEQ ID NO: 50), preferably KPV.

7. The isolated binding moiety of any one of claims 1 to 6, wherein said binding moiety exhibits one or more of the following properties:

- said binding moiety has a binding constant to C5a with a K_d value of 10 nM or less;
- one binding moiety exhibits at least 80% blocking activity for biological effects induced by one molecule C5a;
- said binding moiety does not inhibit CH50 activity in human plasma;
- said binding moiety is capable of reducing *E. coli* induced IL-8 production in human whole blood.

8. The isolated binding moiety of any one of claims 1 to 7, wherein the binding moiety is an antibody or an antigen-binding fragment thereof, said antibody being selected from the group consisting of polyclonal antibodies, monoclonal antibodies, chimeric antibodies, humanized antibodies, and human antibodies.

9. The isolated binding moiety of any one of claims 1 to 7, wherein the binding moiety is an antigen-binding fragment of an antibody, said fragment being selected from the group consisting of Fab fragments, Fab' fragments, $F(ab')_2$ fragments, Fd fragments, Fv fragments, disulfide-linked Fvs (dsFv), single domain antibodies and single chain Fv (scFv) antibodies.

10. An isolated antibody or an antigen-binding fragment thereof comprising:
(i) a heavy chain CDR3 sequence as set forth in SEQ ID NO: 6; or
(ii) a heavy chain CDR3 sequence as set forth in SEQ ID NO: 7;

wherein the heavy chain CDR3 sequence optionally comprises 1, 2 or 3 amino acid exchanges, 1, 2, or 3 amino acid deletions and/or 1, 2, or 3 amino acid additions, further comprising at least one of the following sequences:

(i) a heavy chain CDR2 sequence according to SEQ ID NO: 10;

(ii) a heavy chain CDR2 sequence according to SEQ ID NO: 11;

(iii) a light chain CDR2 sequence according to SEQ ID NO: 12;

(iv) a light chain CDR2 sequence according to SEQ ID NO: 13;

(v) a heavy chain CDR1 sequence according to SEQ ID NO: 14;

(vi) a heavy chain CDR1 sequence according to SEQ ID NO: 15;

(vii) a light chain CDR1 sequence according to SEQ ID NO: 16; or

(viii) a light chain CDR1 sequence according to SEQ ID NO: 17;

wherein the heavy chain CDR2 sequence optionally comprises 1, 2 or 3 amino acid exchanges, 1, 2, or 3 amino acid deletions and/or 1, 2, or 3 amino acid additions; wherein the light chain CDR2 sequence optionally comprises 1, 2 or 3 amino acid exchanges, 1, 2, or 3 amino acid deletions and/or 1, 2, or 3 amino acid additions; wherein the heavy chain CDR1 sequence optionally comprises 1, 2 or 3 amino acid exchanges, 1, 2, or 3 amino acid deletions and/or 1, 2, or 3 amino acid additions; wherein the light chain CDR1 sequence optionally comprises 1, 2 or 3 amino acid exchanges, 1, 2, or 3 amino acid deletions and/or 1, 2, or 3 amino acid additions.

11. The isolated antibody or fragment thereof according to claim 10, further comprising:

(i) a light chain CDR3 sequence as set forth in SEQ ID NO: 8; or

(ii) a light chain CDR3 sequence as set forth in SEQ ID NO: 9;

wherein the light chain CDR3 sequence optionally comprises 1, 2 or 3 amino acid exchanges, 1, 2, or 3 amino acid deletions and/or 1, 2, or 3 amino acid additions.

12. An isolated antibody or an antigen-binding fragment thereof comprising:

(i) a light chain CDR3 sequence as set forth in SEQ ID NO: 8; or

(ii) a light chain CDR3 sequence as set forth in SEQ ID NO: 9;

wherein the light chain CDR3 sequence optionally comprises 1, 2 or 3 amino acid exchanges, 1, 2, or 3 amino acid deletions and/or 1, 2, or 3 amino acid additions.

13. The isolated antibody or fragment thereof according to claim 12, further comprising at least one of the following sequences:

(i) a heavy chain CDR2 sequence according to SEQ ID NO: 10;

(ii) a heavy chain CDR2 sequence according to SEQ ID NO: 11;

(iii) a light chain CDR2 sequence according to SEQ ID NO: 12;

(iv) a light chain CDR2 sequence according to SEQ ID NO: 13;

(v) a heavy chain CDR1 sequence according to SEQ ID NO: 14;

(vi) a heavy chain CDR1 sequence according to SEQ ID NO: 15;

(vii) a light chain CDR1 sequence according to SEQ ID NO: 16; or

(viii) a light chain CDR1 sequence according to SEQ ID NO: 17;

wherein the heavy chain CDR2 sequence optionally comprises 1, 2 or 3 amino acid exchanges, 1, 2, or 3 amino acid deletions and/or 1, 2, or 3 amino acid additions;

wherein the light chain CDR2 sequence optionally comprises 1, 2 or 3 amino acid exchanges, 1, 2, or 3 amino acid deletions and/or 1, 2, or 3 amino acid additions;

wherein the heavy chain CDR1 sequence optionally comprises 1, 2 or 3 amino acid exchanges, 1, 2, or 3 amino acid deletions and/or 1, 2, or 3 amino acid additions;

wherein the light chain CDR1 sequence optionally comprises 1, 2 or 3 amino acid exchanges, 1, 2, or 3 amino acid deletions and/or 1, 2, or 3 amino acid additions.

14. An isolated antibody or an antigen-binding fragment thereof comprising a set of heavy chain CDR3, heavy chain CDR2, and heavy chain CDR1 sequences selected from one of the following sets:

(i) a heavy chain CDR3 sequence according to SEQ ID NO: 6, a heavy chain CDR2 sequence according to SEQ ID NO: 10, and a heavy chain CDR1 sequence according to SEQ ID NO: 14;

(ii) a heavy chain CDR3 sequence according to SEQ ID NO: 6, a heavy chain CDR2 sequence according to SEQ ID NO: 10, and a heavy chain CDR1 sequence according to SEQ ID NO: 15;

(iii) a heavy chain CDR3 sequence according to SEQ ID NO: 6, a heavy chain CDR2 sequence according to SEQ ID NO: 11, and a heavy chain CDR1 sequence according to SEQ ID NO: 14;

(iv) a heavy chain CDR3 sequence according to SEQ ID NO: 6, a heavy chain CDR2 sequence according to SEQ ID NO: 11, and a heavy chain CDR1 sequence according to SEQ ID NO: 15;

(v) a heavy chain CDR3 sequence according to SEQ ID NO: 7, a heavy chain CDR2 sequence according to SEQ ID NO: 10, and a heavy chain CDR1 sequence according to SEQ ID NO: 14;

(vi) a heavy chain CDR3 sequence according to SEQ ID NO: 7, a heavy chain CDR2 sequence according to SEQ ID NO: 10, and a heavy chain CDR1 sequence according to SEQ ID NO: 15;

(vii) a heavy chain CDR3 sequence according to SEQ ID NO: 7, a heavy chain CDR2 sequence according to SEQ ID NO: 11, and a heavy chain CDR1 sequence according to SEQ ID NO: 14; or

(viii) a heavy chain CDR3 sequence according to SEQ ID NO: 7, a heavy chain CDR2 sequence according to SEQ ID NO: 11, and a heavy chain CDR1 sequence according to SEQ ID NO: 15;

wherein each heavy chain CDR3 sequence optionally comprises 1, 2 or 3 amino acid exchanges, 1, 2, or 3 amino acid deletions and/or 1, 2, or 3 amino acid additions;

wherein each heavy chain CDR2 sequence optionally comprises 1, 2 or 3 amino acid exchanges, 1, 2, or 3 amino acid deletions and/or 1, 2, or 3 amino acid additions; and

wherein each heavy chain CDR1 sequence optionally comprises 1, 2 or 3 amino acid exchanges, 1, 2, or 3 amino acid deletions and/or 1, 2, or 3 amino acid additions.

15. An isolated antibody or an antigen-binding fragment thereof comprising a set of light chain CDR3, light chain CDR2, and light chain CDR1 sequences selected from one of the following sets:

(i) a light chain CDR3 sequence according to SEQ ID NO: 8, a light chain CDR2 sequence according to SEQ ID NO: 12, and a light chain CDR1 sequence according to SEQ ID NO: 16;

(ii) a light chain CDR3 sequence according to SEQ ID NO: 8, a light chain CDR2 sequence according to SEQ ID NO: 12, and a light chain CDR1 sequence according to SEQ ID NO: 17;

(iii) a light chain CDR3 sequence according to SEQ ID NO: 9, a light chain CDR2 sequence according to SEQ ID NO: 12, and a light chain CDR1 sequence according to SEQ ID NO: 16; or

(iv) a light chain CDR3 sequence according to SEQ ID NO: 9, a light chain CDR2 sequence according to SEQ ID NO: 12, and a light chain CDR1 sequence according to SEQ ID NO: 17;

wherein each light chain CDR3 sequence optionally comprises 1, 2 or 3 amino acid exchanges, 1, 2, or 3 amino acid deletions and/or 1, 2, or 3 amino acid additions; wherein each light chain CDR2 sequence optionally comprises 1, 2 or 3 amino acid exchanges, 1, 2, or 3 amino acid deletions and/or 1, 2, or 3 amino acid additions; and wherein each light chain CDR1 sequence optionally comprises 1, 2 or 3 amino acid exchanges, 1, 2, or 3 amino acid deletions and/or 1, 2, or 3 amino acid additions.

16. Pharmaceutical composition comprising

(a) the isolated binding moiety according to any one of claims 1 to 9 or

(b) the isolated antibody or antigen-binding fragment thereof according to any one of claims 10 to 15

and further comprising one or more pharmaceutically acceptable carriers, diluents, excipients, fillers, binders, lubricants, glidants, disintegrants, adsorbents, and/or preservatives.

17. Use of

(a) an isolated binding moiety according to any one of claims 1 to 9 or

(b) an isolated antibody or antigen-binding fragment thereof according to any one of claims 10 to 15

for the preparation of a pharmaceutical composition for the prevention and/or treatment of various diseases involving acute inflammation such as systemic inflammatory response syndrome (SIRS), sepsis, severe sepsis, septic shock, ischemia/reperfusion related injuries such as ischemic heart disease, acute lung injury, pneumonia, acute and chronic graft rejection in transplant patients, graft versus host reactions, as well as diseases involving chronic types of inflammation such as renal glomerular diseases such as glomerulonephritis and other entities of renal failure, rheumatoid arthritis and similar auto-immune diseases such as Bechterew's disease, lupus-type diseases, inflammatory bowel disease, Crohn's disease, tumor growth, or solid organ cancer.