What is claimed is:

1. An isolated antibody that binds a fibrin or fibrinogen γC domain, wherein said antibody comprises, individually, a light chain comprising an amino acid sequence having at least 80% sequence identity to the sequence consisting of RSSKSLLHSSGITYLS (SEQ ID NO:2), QMSNLAS (SEQ ID NO:3), and AQNLELPLT (SEQ ID NO:4) and a heavy chain comprising an amino acid sequence having at least 80% sequence identity to the sequence consisting of GYTFTSYWIH (SEQ ID NO:6), LIDPSDSYTNYNQKFRG (SEQ ID NO:7), and SDPTGC (SEQ ID NO:8); and wherein the antibody exhibits at least ~~greater than~~ 20% inhibition of microglial adhesion to the fibrin or fibrinogen γC domain.

2. ~~An~~ The isolated antibody of claim 1 ~~that binds fibrin or fibrinogen γC domain~~, wherein the antibody exhibits at least ~~greater than~~ 50% inhibition of Mac-1 binding to the fibrin or fibrinogen γC domain.

3. ~~An~~ The isolated antibody of claim 1 ~~that binds a fibrin or fibrinogen γC domain~~, wherein the antibody suppresses clinical symptoms of Experimental Autoimmune Encephalomyelitis (EAE) at the time of the relapse.

4. The antibody of any of claims 1 to 3, wherein the antibody binds an $\gamma^{377\text{-}395}$ epitope of the fibrin or fibrinogen γC domain.

~~5. The antibody of any one of claims 1 to 3, wherein the antibody binds an $\gamma^{190\text{-}202}$ epitope of the fibrin or fibrinogen γC domain.~~

56. The antibody of any of claims 1 to 4 ~~5~~, wherein the antibody is a monoclonal antibody.

67. The antibody of any of claims 1 to 46, wherein the antibody is a humanized antibody.

78. The antibody of any of claims 1 to 46, wherein the antibody is a human antibody.

~~9. The antibody of any one of claims 1 to 8, wherein the antibody comprises a light chain with three complementarity determining regions comprising an amino acid sequence selected from the group consisting of RSSKSLLHSSGITYLS (SEQ ID NO:2), QMSNLAS (SEQ ID NO:3), and AQNLELPLT (SEQ ID NO:4).~~

~~10. The antibody of any one of claims 1 to 8, wherein the antibody comprises a heavy chain with three complementarity determining regions comprising an amino acid sequence selected from the group consisting of GYTFTSYWIH (SEQ ID NO:6), LIDPSDSYTNYNQKFRG (SEQ ID NO:7), and SDPTGC (SEQ ID NO:8).~~

~~11. The antibody of any one of claims 1 to 8, wherein the antibody comprises a light chain with three complementarity determining regions comprising an amino acid sequence selected from the group consisting of RSSKSLLHSSGITYLS (SEQ ID NO:2), QMSNLAS (SEQ ID NO:3), and AQNLELPLT (SEQ ID NO:4) and a heavy chain with three complementarity determining regions comprising an amino acid sequence selected from the group consisting of GYTFTSYWIH (SEQ ID NO:6), LIDPSDSYTNYNQKFRG (SEQ ID NO:7), and SDPTGC (SEQ ID NO:8).~~

~~12. The antibody of any one of claims 1 to 11, wherein said antibody comprises a~~

~~light chain variable amino acid sequence of SEQ ID NO:1.~~

~~13. The antibody of any one of claims 1 to 11, wherein said antibody comprises a heavy chain variable amino acid sequence of SEQ ID NO:5.~~

~~14. The antibody of any one of claims 1 to 11, wherein said antibody comprises a light chain variable amino acid sequence of SEQ ID NO:1 and a heavy chain variable amino acid sequence of SEQ ID NO:5.~~

~~15. The antibody of any one of claims 1 to 8, wherein said antibody comprises, individually, a light chain with three complementarity determining regions comprising an amino acid sequence having at least 80% sequence identity to the sequences selected from the group consisting of RSSKSLLHSSGITYLS (SEQ ID NO:2), QMSNLAS (SEQ ID NO:3), and AQNLELPLT (SEQ ID NO:4) and a heavy chain with three complementarity determining regions comprising an amino acid sequence having at least 80% sequence identity to the sequences selected from the group consisting of GYTFTSYWIH (SEQ ID NO:6), LIDPSDSYTNYNQKFRG (SEQ ID NO:7), and SDPTGC (SEQ ID NO:8); and wherein the light chain complementarity domains and heavy chain complementarity domains retain Mac-1 binding ability.~~

8. The antibody of any one of claims 1 to 7, wherein said antibody comprises, individually, a light chain comprising an amino acid sequence having at least 85% sequence identity to the sequence consisting of RSSKSLLHSSGITYLS (SEQ ID NO:2), QMSNLAS (SEQ ID NO:3), and AQNLELPLT (SEQ ID NO:4) and a heavy chain comprising an amino acid sequence having at least 85% sequence identity to the sequence consisting of GYTFTSYWIH (SEQ ID NO:6), LIDPSDSYTNYNQKFRG (SEQ ID NO:7), and SDPTGC (SEQ ID NO:8); and wherein the antibody has an ability to inhibit Mac-1 binding to fibrin or fibrinogen.

9~~16~~. The antibody of any of claims 1 to 7~~8~~, wherein said antibody comprises, individually, a light chain ~~with three complementarity determining regions~~ comprising an amino acid sequence having at least 90% sequence identity to the sequences ~~selected from the group~~ consisting of RSSKSLLHSSGITYLS (SEQ ID NO:2), QMSNLAS (SEQ ID NO:3), and AQNLELPLT (SEQ ID NO:4) and a heavy chain ~~with three complementarity determining regions~~ comprising an amino acid sequence having at least 90% sequence identity to the sequences ~~selected from the group~~ consisting of GYTFTSYWIH (SEQ ID NO:6), LIDPSDSYTNYNQKFRG (SEQ ID NO:7), and SDPTGC (SEQ ID NO:8); and wherein the antibody has an ability to inhibit Mac-1 binding to fibrin or fibrinogen ~~the light~~

~~-chain complementarity domains and heavy chain complementarity domains retain Mac-1 binding ability~~.

10~~17~~. The antibody of any of claims 1 to 7~~8~~, wherein said antibody comprises, individually, a light chain ~~with three complementarity determining regions~~ comprising an amino acid sequence having at least 95% sequence identity to the sequences ~~selected from the group~~ consisting of RSSKSLLHSSGITYLS (SEQ ID NO:2), QMSNLAS (SEQ ID NO:3), and AQNLELPLT (SEQ ID NO:4) and a heavy chain ~~with three complementarity determining regions~~ comprising an amino acid sequence having at least 95% sequence identity to the sequences ~~selected from the group~~ consisting of GYTFTSYWIH (SEQ ID NO:6), LIDPSDSYTNYNQKFRG (SEQ ID NO:7), and SDPTGC (SEQ ID NO:8); and wherein the antibody has an ability to inhibit Mac-1 binding to fibrin or fibrinogen ~~light chain complementarity domains and heavy chain complementarity domains retain Mac-1 binding ability~~.

11~~18~~. The antibody of any of claims 1 to 7~~8~~, wherein said antibody comprises,

individually, a light chain ~~with three complementarity determining regions~~ comprising an amino acid sequence having at least 99% sequence identity to the sequences ~~selected from the group~~ consisting of RSSKSLLHSSGITYLS (SEQ ID NO:2), QMSNLAS (SEQ ID NO:3), and AQNLELPLT (SEQ ID NO:4) and a heavy chain ~~with three complementarity determining regions~~ comprising an amino acid sequence having at least 99% sequence identity to the sequences ~~selected from the group~~ consisting of GYTFTSYWIH (SEQ ID NO:6), LIDPSDSYTNYNQKFRG (SEQ ID NO:7), and SDPTGC (SEQ ID NO:8); and wherein the antibody has an ability to inhibit Mac-1 binding to fibrin or fibrinogen ~~light chain complementarity domains and heavy chain complementarity domains retain Mac-1 binding ability~~.

12. The antibody of any one of claims 1 to 11, wherein said antibody comprises a light chain comprising amino acid sequence consisting of RSSKSLLHSSGITYLS (SEQ ID NO:2), QMSNLAS (SEQ ID NO:3), and AQNLELPLT (SEQ ID NO:4) and a heavy chain comprising amino acid sequence consisting of GYTFTSYWIH (SEQ ID NO:6), LIDPSDSYTNYNQKFRG (SEQ ID NO:7), and SDPTGC (SEQ ID NO:8).

13. The antibody of any one of claims 1 to 12, wherein said antibody comprises a light chain variable amino acid sequence of SEQ ID NO:1 and a heavy chain variable amino acid sequence of SEQ ID NO:5.

1419. ~~A method of alleviating~~Use of the antibody of any one of claims 1 to 13 for the manufacture of a medicament to alleviate a symptom of a pathology associated with Mac-1 binding to fibrin or Mac-1 binding with fibrinogen, ~~the method comprising administering the antibody of any of claims 1 to 18 to a subject in which such alleviation is desired in an amount sufficient to alleviate the symptom of the pathology in the~~wherein said antibody is formulated for administration to said subject.

1520. ~~The method of~~ Use according to claim 1~~4~~9, wherein the subject is a human.

1621. ~~The method of~~Use according to claim 1~~4~~9, wherein said pathology is selected from the group consisting of multiple sclerosis, spinal cord injury, Alzheimer's Disease, stroke,
Rheumatoid Arthritis and cancer.

1722. A pharmaceutical composition comprising an antibody of any of claims 1 to 13 ~~18~~ and a pharmaceutically acceptable carrier.

1823. A kit comprising the antibody of any claims 1 to 13~~8~~.

-1924. A vector comprising a nucleic acid sequence encoding a fibrin $\gamma^{377-395}$ epitope, CKKTTMKIIPFNRLTIG (SEQ ID NO: 18), or a biologically active derivative thereof.

2025. ~~A~~ An in vitro cell comprising the vector of claim 19 ~~24~~.

2126. ~~A method of generating an~~Use of the cell of claim 20 for the manufacture of a medicament for generating an immune response in a subject, wherein the cell generates an antibody that immunospecifically binds to a fibrin $\gamma^{377-395}$ epitope, or a biologically active derivative thereof, ~~the method comprising: wherein said cell is formulated for~~ administration ~~to a subject a first dosage of the cell of claim 23, whereinsuch that a the first dosage of said cell is sufficient to generate an immune response in said subject~~.

2227. ~~The method of~~Use ~~according to~~ claim 2126, ~~further comprising~~ administering ~~the step of administrating to said subject a second dosage of said cell, wherein said second dosage is sufficient to generate an immune response in said subject.~~

23228. ~~The method of~~Use according to any of claims 2126 or 2227, wherein the antibody produced inhibits fibrin/Mac-1 binding in said subject.

23429. A method of screening for a ligand that ~~binds a Mac-1 receptor and~~ modulates Mac-1 receptor activity, the method comprising: (a) providing the antibody of claim 1; (b) contacting a fibrin $y^{377-395}$ epitope CKKTTMKIIPFNRLTIG (SEQ ID NO: 18), or a biologically active derivative thereof, and forming an antibody/polypeptide complex;

(c) contacting the antibody/polypeptide complex with a composition comprising a candidate compound; and (d) determining whether the candidate compound binds the monoclonal antibody; whereby, binding of the candidate compound indicates that said candidate compound is a ligand that modulates Mac-1 receptor activity.

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