What is claimed is:

Claim 1. An isolated monoclonal antibody that binds specifically to PAI-l, comprising:

(a) a heavy chain framework region and a heavy chain variable region, the heavy chain variable region comprising a heavy chain CDR1 region comprising SEQ ID NO: 34, a heavy chain CDR2 region comprising SEQ ID NO: 33, and a heavy chain CDR3 region comprising SEQ ID NO: 32; and

(b) a light chain framework region and a light chain variable region, the light chain variable region comprising a light chain CDR1 region comprising SEQ ID NO: 37, a light chain CDR2 region comprising SEQ ID NO: 145, and a light chain CDR3 region comprising SEQ ID NO: 35.

Claim 2. An isolated monoclonal antibody that binds specifically to PAI-l comprising:

(a) a heavy chain framework region and a heavy chain variable region comprising SEQ ID NO: 86, and

(b) a light chain framework region and a light chain variable region comprising SEQ ID NO: 93.

Claim 3. An isolated monoclonal antibody that binds specifically to PAI-l comprising:

(a) a heavy chain variable region that is at least 95% identical to the heavy chain variable region of the antibody of claim 2, and/or

(b) a light chain variable region that is at least 95% identical to the light chain variable region of the antibody of claim 2.

Claim 4. An isolated monoclonal antibody that binds to essentially the same epitope as the antibody of claim 1.

Claim 5. An isolated monoclonal antibody that binds specifically to PAI- 1, comprising:

(a) a heavy chain framework region and a heavy chain variable region, the heavy chain variable region comprising a heavy chain CDR1 region comprising SEQ ID NO: 34, a heavy chain CDR2 region comprising SEQ ID NO: 33, and a heavy chain CDR3 region comprising SEQ ID NO: 32; and

(b) a light chain framework region and a light chain variable region, the light chain variable region comprising a light chain CDR1 region comprising SEQ ID NO: 37, a light chain CDR2 region comprising SEQ ID NO: 36, and a light chain CDR3 region comprising SEQ ID NO: 35.

Claim 6. The antibody of claim 5, wherein the heavy chain variable region comprises SEQ ID NO: 6, and the light chain variable region comprises SEQ ID NO: 7.

Claim 7. An isolated monoclonal antibody that binds to essentially the sarne epitope as the antibody of claim 5.

Claim 8. A humanized monoclonal antibody that binds specifically to human PAI-1, wherein the antibody comprises:

(a) a heavy chain having a heavy chain variable region comprising SEQ ID NO: 82, or an antigen-binding fragment thereof, and a light chain having a light chain variable region comprising SEQ ID NO: 91, or an antigen-binding fragment thereof;

(b) a heavy chain having a heavy chain variable region comprising SEQ ID NO: 83, or an antigen-binding fragment thereof, and a light chain having a light chain variable region comprising SEQ ID NO: 92, or an antigen-binding fragment thereof:

(c) a heavy chain having a heavy chain variable region comprising SEQ ID NO: 84, or an antigen-binding fragment thereof, and a light chain having a light chain variable region comprising SEQ ID NO: 93, or an antigen-binding fragment thereof;

(d) a heavy chain having a heavy chain variable region comprising SEQ ID NO: 85, or an antigen-binding fragment thereof, and a light chain having a light chain variable region comprising SEQ ID NO: 91 , or an antigen-binding fragment thereof;

(e) a heavy chain having a heavy chain variable region comprising SEQ ID NO: 85, or an antigen-binding fragment thereof, and a light chain having a light chain variable region comprising SEQ ID NO: 93, or an antigen-binding fragment thereof;

(f) a heavy chain having a heavy chain variable region comprising SEQ ID NO: 86, or an antigen-binding fragment thereof, and a light chain having a light chain variable region comprising SEQ ID NO: 94, or an antigen-binding fragment thereof;

(g) a heavy chain having a heavy chain variable region comprising SEQ ID NO: 87, or an antigen-binding fragment thereof, and a light chain having a light chain variable region comprising SEQ ID NO: 95, or an antigen-binding fragment thereof;

(h) a heavy chain having a heavy chain variable region comprising SEQ ID NO: 88, or an antigen-binding fragment thereof, and a light chain having a light chain variable region comprising SEQ ID NO: 96, or an antigen-binding fragment thereof;

(i) a heavy chain having a heavy chain variable region comprising SEQ ID NO: 89, or an antigen-binding fragment thereof, and a light chain having a light chain variable region comprising SEQ ID NO: 97, or an antigen-binding fragment thereof;

(j) a heavy chain having a heavy chain variable region comprising SEQ ID NO: 90, or an antigen-binding fragment thereof, and a light chain having a light chain variable region comprising SEQ ID NO: 98, or an antigen-binding fragment thereof;

(1) a heavy chain having a heavy chain variable region comprising SEQ ID NO: 86, or an antigen-binding fragment thereof, and a light chain having a light chain variable region comprising SEQ ID NO: 95, or an antigen-binding fragment thereof;

(m) a heavy chain having a heavy chain variable region comprising SEQ ID NO: 89, or an antigen-binding fragment thereof, and a light chain having a light chain variable region comprising SEQ ID NO: 93, or an antigen-binding fragment thereof; or

(n) a heavy chain having a heavy chain variable region comprising SEQ ID NO: 89, or an antigen-binding fragment thereof, and a light chain having a light chain variable region comprising SEQ ID NO: 95, or an antigen-binding fragment thereof.

Claim 9. An isolated monoclonal antibody that binds specifically to PAI-1, comprising

(a) a heavy chain variable region comprising a heavy chain CDR1 region comprising SEQ ID NO: 22, a heavy chain CDR2 region comprising SEQ ID NO: 21, and a heavy chain CDR3 region comprising SEQ ID NO: 20; and a light chain variable region comprising a light chain CDR1 region comprising SEQ ID NO: 25, a light chain CDR2 region comprising SEQ ID NO: 24, and a light chain CDR3 region comprising SEQ ID NO: 23,

(b) a heavy chain variable region comprising a heavy chain CDR1 region comprising SEQ ID NO: 28, a heavy chain CDR2 region comprising SEQ ID NO: 27, and a heavy chain CDR3 region comprising SEQ ID NO: 26; and a light chain variable region comprising a light chain CDR1 region comprising SEQ ID NO: 31, a light chain CDR2 region comprising SEQ ID NO: 30, and a light chain CDR3 region comprising SEQ ID NO: 29,

(c) a heavy chain variable region comprising a heavy chain CDR1 region comprising SEQ ID NO: 40, a heavy chain CDR2 region comprising SEQ ID NO: 39, and a heavy chain CDR3 region comprising SEQ ID NO: 38; and a light chain variable region comprising a

light chain CDR1 region comprising SEQ ID NO: 43, a light chain CDR2 region comprising SEQ ID NO: 42, and a light chain CDR3 region comprising SEQ ID NO: 41,

(d) a heavy chain variable region comprising a heavy chain CDR1 region comprising SEQ ID NO: 46, a heavy chain CDR2 region comprising SEQ ID NO: 45, and a heavy chain CDR3 region comprising SEQ ID NO: 44; and a light chain variable region comprising a light chain CDR 1 region comprising SEQ ID NO: 49, a light chain CDR2 region comprising SEQ ID NO: 48, and a light chain CDR3 region comprising SEQ ID NO: 47,

(e) a heavy chain variable region comprising a heavy chain CDR1 region comprising SEQ ID NO: 52, a heavy chain CDR2 region comprising SEQ ID NO: 51, and a heavy chain CDR3 region comprising SEQ ID NO: 50; and a light chain variable region comprising a light chain CDR1 region comprising SEQ ID NO: 55, a light chain CDR2 region comprising SEQ ID NO: 54, and a light chain CDR3 region comprising SEQ ID NO: 53,

(f) a heavy chain variable region comprising a heavy chain CDR 1 region comprising SEQ ID NO: 58, a heavy chain CDR2 region comprising SEQ ID NO: 57, and heavy chain CDR3 region comprising SEQ ID NO: 56; and a light chain variable region comprising a light chain CDR1 region comprising SEQ ID NO: 61, a light chain CDR2 region comprising SEQ ID NO: 60, and a light chain CDR3 region comprising SEQ ID NO: 59,

(g) a heavy chain variable region comprising a heavy chain CDR1 region comprising SEQ ID NO: 64, a heavy chain CDR2 region comprising SEQ ID NO: 63, and a heavy chain CDR3 region comprising SEQ ID NO: 62; and a light chain variable region comprising a light chain CDR1 region comprising SEQ ID NO: 67, a light chain CDR2 region comprising SEQ ID NO: 66, and a light chain CDR3 region comprising SEQ ID NO: 65,

(h) a heavy chain variable region comprising a heavy chain CDR1 region comprising SEQ ID NO: 70, a heavy chain CDR2 region comprising SEQ ID NO: 69, and a heavy chain CDR3 region comprising SEQ ID NO: 68; and a light chain variable region comprising a light chain CDR1 region comprising SEQ ID NO: 73, a light chain CDR2 region comprising SEQ ID NO: 72, and a light chain CDR3 region comprising SEQ ID NO: 71; or

(i) a heavy chain variable region comprising a heavy chain CDR1 region comprising SEQ ID NO: 76, heavy chain CDR2 region comprising SEQ ID NO: 75, and a heavy chain CDR3 region comprising SEQ ID NO: 74; and a light chain variable region comprising a light chain CDR1 region comprising SEQ ID NO: 79, a light chain CDR2 region comprising SEQ ID NO: 78, and a light chain CDR3 region comprising SEQ ID NO: 77.

Claim 10. An isolated monoclonal antibody that binds specifically to PAI-1, that binds to essentially the same epitope on PAI-1 as the humanized monoclonal antibody of claim 8 or claim 9.

Claim 11. Use of a pharmaceutically effective amount of a PAI-1 antibody in the manufacture of a medicament for ~~A method of~~ restoring plasmin generation ~~comprising administering~~ wherein said antibody is administered to a subject in need thereof orally, parenterally by a solution for injection, by inhalation, or topically~~, a pharmaceutically effective amount of a PAI-1 antibody.~~=.

Claim 12. The ~~method~~ use of claim 11, wherein the medicament ~~method~~ treats a condition comprising increased levels of fibrotic tissue.

Claim 13. The ~~method~~ use of claim 12, wherein the condition is fibrosis, skin fibrosis, systemic sclerosis, lung fibrosis, idiopathic pulmonary fibrosis, interstitial lung disease, chronic lung disease, liver fibrosis, kidney fibrosis, chronic kidney disease, thrombosis, venous and arterial thrombosis, deep vein thrombosis, peripheral limb ischemia, disseminated intravascular coagulation thrombosis, acute ischemic stroke with and without thrombolysis, or stent restenosis.

Claim 14. The ~~method~~ use of claims 11, 12, or 13 wherein the PAI-1 antibody comprises the antibody of any of the preceding claims.

Claim 15. Use of a pharmaceutically effective amount of a PAI-1 antibody for the manufacture of a medicament for treating a condition caused by increased levels of PAI-1 or increased sensitivity to PAI-1, comprising administering to a patient, orally, parenterally by a solution for injection, by inhalation, or topically.

What is claimed is:

Claim 1. An isolated monoclonal antibody that binds specifically to PAI-l, comprising:

(a) a heavy chain framework region and a heavy chain variable region, the heavy chain variable region comprising a heavy chain CDR1 region comprising SEQ ID NO: 34, a heavy chain CDR2 region comprising SEQ ID NO: 33, and a heavy chain CDR3 region comprising SEQ ID NO: 32; and

(b) a light chain framework region and a light chain variable region, the light chain variable region comprising a light chain CDR1 region comprising SEQ ID NO: 37, a light chain CDR2 region comprising SEQ ID NO: 145, and a light chain CDR3 region comprising SEQ ID NO: 35.

Claim 2. An isolated monoclonal antibody that binds specifically to PAI-l comprising:

(a) a heavy chain framework region and a heavy chain variable region comprising SEQ ID NO: 86, and

(b) a light chain framework region and a light chain variable region comprising SEQ ID NO: 93.

Claim 3. An isolated monoclonal antibody that binds specifically to PAI-l comprising:

(a) a heavy chain variable region that is at least 95% identical to the heavy chain variable region of the antibody of claim 2, and/or

(b) a light chain variable region that is at least 95% identical to the light chain variable region of the antibody of claim 2.

Claim 4. An isolated monoclonal antibody that binds to essentially the same epitope as the antibody of claim 1.

Claim 5. An isolated monoclonal antibody that binds specifically to PAI- 1, comprising:

(a) a heavy chain framework region and a heavy chain variable region, the heavy chain variable region comprising a heavy chain CDR1 region comprising SEQ ID NO: 34, a heavy chain CDR2 region comprising SEQ ID NO: 33, and a heavy chain CDR3 region comprising SEQ ID NO: 32; and

(b) a light chain framework region and a light chain variable region, the light chain variable region comprising a light chain CDR1 region comprising SEQ ID NO: 37, a light chain CDR2 region comprising SEQ ID NO: 36, and a light chain CDR3 region comprising SEQ ID NO: 35.

Claim 6. The antibody of claim 5, wherein the heavy chain variable region comprises SEQ ID NO: 6, and the light chain variable region comprises SEQ ID NO: 7.

Claim 7. An isolated monoclonal antibody that binds to essentially the sarne epitope as the antibody of claim 5.

Claim 8. A humanized monoclonal antibody that binds specifically to human PAI-1, wherein the antibody comprises:

(a) a heavy chain having a heavy chain variable region comprising SEQ ID NO: 82, or an antigen-binding fragment thereof, and a light chain having a light chain variable region comprising SEQ ID NO: 91, or an antigen-binding fragment thereof;

(b) a heavy chain having a heavy chain variable region comprising SEQ ID NO: 83, or an antigen-binding fragment thereof, and a light chain having a light chain variable region comprising SEQ ID NO: 92, or an antigen-binding fragment thereof:

(c) a heavy chain having a heavy chain variable region comprising SEQ ID NO: 84, or an antigen-binding fragment thereof, and a light chain having a light chain variable region comprising SEQ ID NO: 93, or an antigen-binding fragment thereof;

(d) a heavy chain having a heavy chain variable region comprising SEQ ID NO: 85, or an antigen-binding fragment thereof, and a light chain having a light chain variable region comprising SEQ ID NO: 91 , or an antigen-binding fragment thereof;

(e) a heavy chain having a heavy chain variable region comprising SEQ ID NO: 85, or an antigen-binding fragment thereof, and a light chain having a light chain variable region comprising SEQ ID NO: 93, or an antigen-binding fragment thereof;

(f) a heavy chain having a heavy chain variable region comprising SEQ ID NO: 86, or an antigen-binding fragment thereof, and a light chain having a light chain variable region comprising SEQ ID NO: 94, or an antigen-binding fragment thereof;

(g) a heavy chain having a heavy chain variable region comprising SEQ ID NO: 87, or an antigen-binding fragment thereof, and a light chain having a light chain variable region comprising SEQ ID NO: 95, or an antigen-binding fragment thereof;

(h) a heavy chain having a heavy chain variable region comprising SEQ ID NO: 88, or an antigen-binding fragment thereof, and a light chain having a light chain variable region comprising SEQ ID NO: 96, or an antigen-binding fragment thereof;

(i) a heavy chain having a heavy chain variable region comprising SEQ ID NO: 89, or an antigen-binding fragment thereof, and a light chain having a light chain variable region comprising SEQ ID NO: 97, or an antigen-binding fragment thereof;

(j) a heavy chain having a heavy chain variable region comprising SEQ ID NO: 90, or an antigen-binding fragment thereof, and a light chain having a light chain variable region comprising SEQ ID NO: 98, or an antigen-binding fragment thereof;

(1) a heavy chain having a heavy chain variable region comprising SEQ ID NO: 86, or an antigen-binding fragment thereof, and a light chain having a light chain variable region comprising SEQ ID NO: 95, or an antigen-binding fragment thereof;

(m) a heavy chain having a heavy chain variable region comprising SEQ ID NO: 89, or an antigen-binding fragment thereof, and a light chain having a light chain variable region comprising SEQ ID NO: 93, or an antigen-binding fragment thereof; or

(n) a heavy chain having a heavy chain variable region comprising SEQ ID NO: 89, or an antigen-binding fragment thereof, and a light chain having a light chain variable region comprising SEQ ID NO: 95, or an antigen-binding fragment thereof.

Claim 9. An isolated monoclonal antibody that binds specifically to PAI-1, comprising

(a) a heavy chain variable region comprising a heavy chain CDR1 region comprising SEQ ID NO: 22, a heavy chain CDR2 region comprising SEQ ID NO: 21, and a heavy chain CDR3 region comprising SEQ ID NO: 20; and a light chain variable region comprising a light chain CDR1 region comprising SEQ ID NO: 25, a light chain CDR2 region comprising SEQ ID NO: 24, and a light chain CDR3 region comprising SEQ ID NO: 23,

(b) a heavy chain variable region comprising a heavy chain CDR1 region comprising SEQ ID NO: 28, a heavy chain CDR2 region comprising SEQ ID NO: 27, and a heavy chain CDR3 region comprising SEQ ID NO: 26; and a light chain variable region comprising a light chain CDR1 region comprising SEQ ID NO: 31, a light chain CDR2 region comprising SEQ ID NO: 30, and a light chain CDR3 region comprising SEQ ID NO: 29,

(c) a heavy chain variable region comprising a heavy chain CDR1 region comprising SEQ ID NO: 40, a heavy chain CDR2 region comprising SEQ ID NO: 39, and a heavy chain CDR3 region comprising SEQ ID NO: 38; and a light chain variable region comprising a

light chain CDR1 region comprising SEQ ID NO: 43, a light chain CDR2 region comprising SEQ ID NO: 42, and a light chain CDR3 region comprising SEQ ID NO: 41,

(d) a heavy chain variable region comprising a heavy chain CDR1 region comprising SEQ ID NO: 46, a heavy chain CDR2 region comprising SEQ ID NO: 45, and a heavy chain CDR3 region comprising SEQ ID NO: 44; and a light chain variable region comprising a light chain CDR 1 region comprising SEQ ID NO: 49, a light chain CDR2 region comprising SEQ ID NO: 48, and a light chain CDR3 region comprising SEQ ID NO: 47,

(e) a heavy chain variable region comprising a heavy chain CDR1 region comprising SEQ ID NO: 52, a heavy chain CDR2 region comprising SEQ ID NO: 51, and a heavy chain CDR3 region comprising SEQ ID NO: 50; and a light chain variable region comprising a light chain CDR1 region comprising SEQ ID NO: 55, a light chain CDR2 region comprising SEQ ID NO: 54, and a light chain CDR3 region comprising SEQ ID NO: 53,

(f) a heavy chain variable region comprising a heavy chain CDR 1 region comprising SEQ ID NO: 58, a heavy chain CDR2 region comprising SEQ ID NO: 57, and heavy chain CDR3 region comprising SEQ ID NO: 56; and a light chain variable region comprising a light chain CDR1 region comprising SEQ ID NO: 61, a light chain CDR2 region comprising SEQ ID NO: 60, and a light chain CDR3 region comprising SEQ ID NO: 59,

(g) a heavy chain variable region comprising a heavy chain CDR1 region comprising SEQ ID NO: 64, a heavy chain CDR2 region comprising SEQ ID NO: 63, and a heavy chain CDR3 region comprising SEQ ID NO: 62; and a light chain variable region comprising a light chain CDR1 region comprising SEQ ID NO: 67, a light chain CDR2 region comprising SEQ ID NO: 66, and a light chain CDR3 region comprising SEQ ID NO: 65,

(h) a heavy chain variable region comprising a heavy chain CDR1 region comprising SEQ ID NO: 70, a heavy chain CDR2 region comprising SEQ ID NO: 69, and a heavy chain CDR3 region comprising SEQ ID NO: 68; and a light chain variable region comprising a light chain CDR1 region comprising SEQ ID NO: 73, a light chain CDR2 region comprising SEQ ID NO: 72, and a light chain CDR3 region comprising SEQ ID NO: 71; or

(i) a heavy chain variable region comprising a heavy chain CDR1 region comprising SEQ ID NO: 76, heavy chain CDR2 region comprising SEQ ID NO: 75, and a heavy chain CDR3 region comprising SEQ ID NO: 74; and a light chain variable region comprising a light chain CDR1 region comprising SEQ ID NO: 79, a light chain CDR2 region comprising SEQ ID NO: 78, and a light chain CDR3 region comprising SEQ ID NO: 77.

Claim 10. An isolated monoclonal antibody that binds specifically to PAI-1, that binds to essentially the same epitope on PAI-1 as the humanized monoclonal antibody of claim 8 or claim 9.

Claim 11. Use of a pharmaceutically effective amount of a PAI-1 antibody in the manufacture of a medicament for restoring plasmin generation wherein said antibody is administered to a subject in need thereof orally, parenterally by a solution for injection, by inhalation, or topically.

Claim 12. The use of claim 11, wherein the medicament treats a condition comprising increased levels of fibrotic tissue.

Claim 13. The use of claim 12, wherein the condition is fibrosis, skin fibrosis, systemic sclerosis, lung fibrosis, idiopathic pulmonary fibrosis, interstitial lung disease, chronic lung disease, liver fibrosis, kidney fibrosis, chronic kidney disease, thrombosis, venous and arterial thrombosis, deep vein thrombosis, peripheral limb ischemia, disseminated intravascular coagulation thrombosis, acute ischemic stroke with and without thrombolysis, or stent restenosis.

Claim 14. The use of claims 11, 12, or 13 wherein the PAI-1 antibody comprises the antibody of any of the preceding claims.

Claim 15. Use of a pharmaceutically effective amount of a PAI-1 antibody for the manufacture of a medicament for treating a condition caused by increased levels of PAI-1 or increased sensitivity to PAI-1, comprising administering to a patient, orally, parenterally by a solution for injection, by inhalation, or topically.