CLAIMS:

1. Use of the anti-αv integrin antibody DI17E6, or a biologically active variant or modification thereof, in the manufacture of a medicament for the prophylaxis and/or treatment of fibrosis and/or fibrotic disorders.

2. The use according to claim 1, wherein the organs affected by said fibrosis and/or fibrotic disorders are selected from the group consisting of lung, liver, kidney, cardiovascular system or skin.

3. The use according to claim 1 and/or 2, wherein said fibrotic disorder affects one or more organs selected from the group consisting of lung, liver, kidney, heart and skin.

4. The use according to claim 1, 2 and/or 3, wherein said fibrotic disorder comprises or is systemic sclerosis (SSc).

5. Use of the anti-αv integrin antibody DI17E6, or a biologically active variant or modification thereof, in the manufacture of a medicament for the treatment of systemic sclerosis (SSc).

6. The use according to claim 4 and/or 5, wherein the systemic sclerosis comprises systemic sclerosis of the lung, liver, kidney, cardiovascular system or skin.

7. The use according to of claim 4, 5 and/or 6, wherein the systemic sclerosis affects one or more organs selected from the group consisting of lung, liver, kidney, heart and skin.

8. The use according to claim 4, wherein the systemic sclerosis affects the cardio-vascular system, the blood vessels and/or the blood.

9. The use according to any of the claims 1-8, wherein the fibrotic disorder and/or the systemic sclerosis comprises one or more indications selected from the group consisting of idiophathic pulmonary fibrosis, primary sclerosing cholangitis, non-alcoholic steatohepatitis (NASH), primary focal glomerulosclerosis, primary segmental glomerulosclerosis, diabetic nephropathy, diastolic dysfunction and myelofibrosis.

10. The use according to any of the claims 1-5, wherein said fibrotic disorder and/or systemic sclerosis comprises pulmonary fibrosis and/or alveolitis (interstitial lung disease, ILD).

11. The use according to claim 1, wherein the disease to be treated is systemic sclerosis of the lung and/or skin.

12. The use according to claim 11, wherein the systemic sclerosis of the skin is diffuse cutaneous systemic sclerosis (dcSSc) or limited cutaneous systemic sclerosis (lcSSc).

13. Use of the anti-αv integrin antibody DI17E6, or a biologically active variant or modification thereof, in the manufacture of a medicament for the treatment of pulmonary fibrosis, alveolitis (interstitial lung disease, ILD), and/or sclerodermal interstitial lung disease (SScILD).

14. The use according to any of the claims 1-13, wherein said treatment comprises the administration of a dose, preferably an effective dose, of said antibody, or biologically active variant or modification thereof, in an amount of 500 mg - 3000 mg per month.

15. The use according to any of the claims 1-14, wherein said treatment comprises the administration of a dose, preferably an effective dose, of said antibody, or biologically active variant or modification thereof, in an amount of 1000 mg - 2000 mg per month.

16. The use according to claim 14 and/or 15, wherein the dose, preferably the effective dose, is to be administered in a single dose.

17. The use according to any of the claims 1-15, wherein said treatment comprises the administration of said antibody, or biologically active variant or modification thereof, in an amount of about 500 mg per month, about 1000 mg per month, about 1500 mg per month, about 2000 mg per month or about 2500 mg per month.

18. The use according to claim 17, wherein said amount is to be administered in a single dose.

19. The use according to any of the claims 1-18, wherein said antibody or said biologically active variant or modification thereof is to be administered as monotherapy.

20. The use according to any of the claims 1-19, wherein said biological active variant or modification comprises the CDR regions and heavy and light chain variable regions of DI17E6, which are at least 80% identical, at least 90% identical, at least 95% identical, at least 98% identical or at least 99% identical in amino acid sequence compared to the variable regions of DI17E6.

21. The use according to claim 20, comprising one or more modifications within the heavy chain framework regions
FR1: QVQLQQSG**A**ELA**E**PGASVK**M**SCKASGYTFS (SEQ ID No. 16)
FR2: WV**K**Q**R**PGQGLEWIG (SEQ JD No. 17)
FR3: KATMT**A**DTS**S**STAYM**Q**LS**G**L**T**SED**S**AVYYCAS (SEQ ID No. 18)
FR4: WGQGT**S**VTVSS (SEQ ID No. 19),
wherein one or more of the bold and underlined positions are mutated and are different compared to the original respective sequence.

22. The use according to any of the claims 1-21, wherein the biological active variant or modification comprises a constant region, which is at least 80% identical, at least 90% identical, at least 95% identical, at least 99% identical, at least 99.5% identical or at least 99.9% identical in amino acid sequence compared to the constant region of DI17E6.

23. The use according to claim 22, comprising a human IgG1 constant region instead of human IgG2, or a human IgG2 hinge region instead of the human IgG1 hinge.

24. The use according to any of the claims 1-23, wherein the antibody is to be administered in an combination therapy setting in combination with MMF (Mycophenolate).

25. The use according to claim 24, wherein the disorder is Systemic sclerosis (SSc) or Scleroderma-ILD (SSc-ILD).

26. Fibrosis gene signature, comprising two or more of the genes selected from the group consisting of COL 15A1 (NM_001855), COL1A1 (NM_000088), COMP (NM_000095),

RGS5 (NM_003617), COL10A1 (NM_000493), COL5A1 (NM_000093), IGFBP2 (NM_000597), NM_005576, MOXD1 (NM_015529), ADRA2A (NM_000681), COL5A2 (NM_000393), MMP10 (NM_002425), TNFRSF21 (NM_014452), ITGA7 (NM_002206), TGF-β3 (NM_003239), MMP11 (NM_005940), SPP1 (NM_000582), CCL2 (NM_002982), and TNC (NM_002160).

27. Fibrosis gene signature, comprising the genes COL15A1 (NM_001855), COL1A1 (NM_000088), COMP (NM_000095), RGS5 (NM_003617), COL10A1 (NM_000493), COL5A 1 (NM_000093), IGFBP2 (NM_000597), NM_005576, MOXD1 (NM_015529), ADRA2A (NM_000681), COL5A2 (NM_000393), MMP10 (NM_002425), TNFRSF21 (NM_014452), ITGA7 (NM_002206), TGF-β3 (NM_003239), MMP11 (NM_005940), SPP1 (NM_000582), CCL2 (NM_002982), and TNC (NM_002160).

28. Use of the anti-αv integrin antibody DI17E6, or a biologically active variant or modification thereof, in the manufacture of a medicament for the treatment of fibrosis and/or fibrotic diseases in a subject wherein said subject is characterized by a gene signature according to claim 26 and/or 27.

29. Use of the anti-αv integrin antibody DI17E6, or a biologically active variant or modification thereof, in the manufacture of a medicament for the treatment of fibrosis and/or fibrotic diseases in a subject, wherein said subject is characterized by a higher-than-threshold score calculated from a multi-gene signature comprising 2 or more, preferably 5 or more, more preferably 9 or more, even more preferably 15 or more and especially 16, 17, 18 or 19 genes, selected from the group consisting of the genes COL15A1 (NM~001855), COL1A1 (NM_000088), COMP (NM_000095), RGS5 (NM_003617), COL10A1 (NM_000493), COL5A1 (NM_000093), IGFBP2 (NM_000597), NM_005576, MOXD1 (NM_015529), ADRA2A (NM_000681), COL5A2 (NM_000393), MMP10 (NM_002425), TNFRSF21 (NM_014452), ITGA7 (NM_002206), TGF-β3 (NM_003239), MMP11 (NM_005940), SPP1 (NM_000582), CCL2 (NM_002982), and TNC (NM_002160), in particular the 9-gene signature based on the genes COL 15A1 (NM_001855), COL 1A1 (NM_000088), COMP (NM_000095), COL 10A1 (NM_000493), COL5A 1 (NM_000093), COL5A2 (NM_000393), ITGA7 (NM_002206), MMP11 (NM_005940), and TNC (NM_002160) hereafter also referred to as TUAD signature.

30. A method of monitoring the severity of fibrosis in fibrotic diseases and/or the emergence of fibrosis in diseases with potential to develop fibrosis in a subject by tracking the changes of a score calculated from a multi-gene signature comprising 2 or more, preferably 5 or more, more preferably 9 or more, even more preferably 15 or more and especially 16, 17, 18 or 19 genes, selected from the group consisting of the genes COL15A1 (NM_001855), COL1A1 (NM_000088), COMP (NM_000095), RGS5 (NM_003617), COL 10A1 (NM_000493), COL5A1 (NM_000093), IGFBP2 (NM_000597), NM_005576, MOXD1 (NM_015529), ADRA2A (NM_000681), COL5A2 (NM_000393), MMP10 (NM_002425), TNFRSF21 (NM_014452), ITGA7 (NM_002206), TGF-β3 (NM_003239), MMP11 (NM_005940), SPP1 (NM_000582), CCL2 (NM_002982), and TNC (NM_002160), in particular the 9-gene signature based on the genes COL 15A1 (NM_001855), COL 1A1 (NM_000088), COMP (NM_000095), COL10A1 (NM_000493), COL5A1 (NM_000093), COL5A2 (NM_000393), ITGA7 (NM_002206), MMP11 (NM_005940), and TNC (NM_002160) hereafter also referred to as TUAD signature.

31. The method according to claim 30, or the use according to claim 28 and/or 29 wherein the fibrosis and/or fibrotic disorders are as defined in on or more of claims 1 to 13.

32. The method according to claim 30 or claim 31 or the use according to claim 28 and/or 29 or claim 31, wherein the subject will also receive mycophenolate.

33. The method according to one or more of claims 30-32, or the use according to claim 28 and/or 29, or claim 31-32, wherein the anti-αv integrin anti-body DI17E6 is abituzumab.

34. The use according to one or more of claims 1-27 or 33 wherein the subject will also receive mycophenolate.

35. The use according to one or more of the preceding claims, wherein the disorder is SSc-ILD and/or the subject will also receive mycophenolate.

36.The use according to one or more of the preceding claims, wherein said antibody is abituzumab.

37. The use of DI17E6, or a biologically active variant or modification thereof, preferably a bio-logically active variant or modification thereof according to one or more of claims 20-23, for the manufacture of a medicament for the prophylaxis and/or, treatment of fibrosis and/or fibrotic disorders.

38. The use according to claim 37, wherein the medicament is for the treatment of fibrosis and/or fibrotic disorders according to one or more of claims 1-36.

39. The use according to claim 36, 37 and/or 38, wherein the DI17E6 antibody, or the bio-logically active variant or modification thereof, is Abituzumab.

40. The use according to claim 36, 37, 38 and/or 39 wherein the fibrotic disorder and/or the systemic sclerosis comprises one or more indications selected from the group consisting of idiophathic pulmonary fibrosis, primary sclerosing cholangitis, non-alcoholic steatohepatitis (NASH), primary focal glomerulo-sclerosis, primary segmental glomerulosclerosis, diabetic nephropathy, diastolic dysfunction and myelofibrosis.

41. The use according to claim 36, 37, 38, 39 and/or 40, wherein the fibrotic disorder and/or the systemic sclerosis comprises pulmonary fibrosis, alveolitis (interstitial lung disease, ILD), and/or sclerodermal interstitial lung disease (SSc-ILD).

42. The use according to claim 36, 37, 38, 39, 40 and/or 41, wherein the fibrotic disorder and/or the systemic sclerosis comprises focal segmental glomerulosclerosis (FSGS).

43. The use according to claim 36, 37, 38, 39, 40, 41 and/or 42, wherein the treatment when it begins, will additionally comprise the administration of one or more active ingredients, selected from the group consisting of mycophenolic acid, mycophenolate, mycophenolate mofetil, mycophenolate sodium, methotrexate, amethopterin and prednisone.

44. The use according to one or more of the preceding claims, wherein the anti-αv integrin anti-body DI17E6, or the biologically active variant or modification thereof, is the antibody with the registered International Non-proprietary Name (INN) Abituzumab.

45. The use according to any of the preceding claims, wherein the antibody is the anti-body with the registered International Non-proprietary Name (INN) Abituzumab.

46. The use according to one or more of the preceding claims, wherein the anti-αv integrin antibody DI17E6, or the biologically active variant or modification thereof, is the antibody with the registered International Non-proprietary Name (INN) Abituzumab.