WHAT IS CLAIMED IS:

1. An isolated antibody that specifically binds αvβ8, wherein the antibody inhibits release of active, mature TGFβ peptide, but does not significantly inhibit adhesion of latent TGFβ to αvβ8 on a αvβ8-expressing cell.

2. The isolated antibody of claim 1, wherein said antibody specifically binds to β8.

3. The isolated antibody of claim 1, wherein said antibody specifically binds to an epitope on β8 that is within the polypeptide sequence of SEQ ID NO:11.

4. The isolated antibody of claim 1, wherein said antibody competes for binding to αvβ8 with an antibody having a light chain variable region comprising three light chain CDRs of SEQ ID NO: 5, SEQ ID NO: 6, and SEQ ID NO: 7, and a heavy chain variable region comprising three heavy chain CDRs of SEQ ID NO: 8, SEQ ID NO: 9, SEQ ID NO: 10.

5. The isolated antibody of claim 1, wherein the antibody has a light chain variable region comprising three light chain CDRs of SEQ ID NO: 5, SEQ ID NO: 6, and SEQ ID NO: 7, and a heavy chain variable region comprising three heavy chain CDRs of SEQ ID NO: 8, SEQ ID NO: 9, SEQ ID NO: 10.

6. The isolated antibody of claim 1, wherein the antibody has a light chain variable region of SEQ ID NO:3 or 4 and a heavy chain variable region of SEQ ID NO:1 or 2.

7. The isolated antibody of claim 1, wherein the isotype of the antibody is IgG1, IgG2, IgG3 or IgG4.

8. The isolated antibody of claim 1, wherein the antibody is a monoclonal antibody.

9. The isolated antibody of claim 1, wherein the antibody is human, humanized or chimeric antibody.

10. A pharmaceutical composition comprising the antibody of claim 1. and a pharmaceutically acceptable excipient.

11. An isolated nucleic acid encoding the antibody of claim 1.

12. An isolated expression vector comprising the nucleic acid of claim 11.

13. An isolated host cell comprising the vector of claim 12.

14. A method of reducing TGFβ activation in an individual, the method comprising administering the antibody of any one of claims 1-9 to an individual in need thereof, thereby reducing TGFβ activation in the individual.

15. The method of claim 14, wherein the individual is a human.

16. The method of claim 14, wherein the individual has at least one condition selected from the group consisting of chronic obstructive pulmonary disease (COPD), asthma, arthritis, a fibrotic disorder, an inflammatory brain autoimmune disease, multiple sclerosis, a demyelinating disease (*e.g.*, transverse myelitis, Devic's disease, Guillain-Barré syndrome), neuroinflammation, kidney disease, adenocarcinoma, squamous carcinoma, glioma, breast carcinoma, and cancer growth and metastasis, and wherein TGFβ reduction results in amelioration of the condition.

17. The method of claim 16, wherein the fibrotic disorder is selected from the group consisting of airway fibrosis, idiopathic pulmonary fibrosis, non-specific interstitial pneumonia, post-infectious lung fibrosis, diffuse alveolar damage, collagen-vascular disease associated lung fibrosis, drug-induced lung fibrosis, silicosis, asbestos-related lung fibrosis, respiratory bronchiolitis, respiratory bronchiolitis interstitial lung disease, desquamative interstitial fibrosis, cryptogenic organizing pneumonia, chronic hypersensitivity pneumonia, drug-related lung fibrosis, renal fibrosis, and liver fibrosis.

18. A method of determining the presence of integrin β8 in a biological sample comprising

contacting the biological sample with an antibody of any one of claims 1-9 attached to a detectable label to form a labeled antibody; and

detecting the presence of the labeled antibody, thereby determining the presence of integrin β8.

19. The method of claim 18, wherein said determining is *in vitro*.

20. The method of claim 18, wherein said determining is *in vitro*.

21. The method of claim 18, wherein said method is used to detect a condition selected from the group consisting of chronic obstructive pulmonary disease (COPD), asthma, arthritis, a fibrotic disorder, an inflammatory brain autoimmune disease, multiple sclerosis, a demylinating disease (*e.g.*, transverse myelitis, Devic's disease, Guillain-Barré syndrome), neuroinflammation, kidney disease, adenocarcinoma, squamous carcinoma, glioma, breast carcinoma, and cancer growth and metastasis.

22. A method of reducing TGFβ activation in an individual, the method comprising administering an antagonist of integrin αvβ8 to an individual in need thereof, thereby reducing TGFβ activation in the individual.

23. The method of claim 22, wherein the antagonist inhibits release of active, mature TGFβ peptide, but does not significantly inhibit adhesion of latent TGFβ to αvβ8 on an αvβ8-expressing cell.

24. The method of claim 22, wherein the individual is a human.

25. The method of claim 22, wherein the antagonist is antibody that specifically binds to αvβ8.

26. The method of claim 22, wherein the individual has at least one condition selected from the group consisting of chronic obstructive pulmonary disease (COPD), asthma, arthritis, a fibrotic disorder, an inflammatory brain autoimmune disease, multiple sclerosis, a demylinating disease (*e.g.*, transverse myelitis, Devic's disease, Guillain-Barré syndrome), neuroinflammation, kidney disease, adenocarcinoma, squamous carcinoma, glioma, breast carcinoma, and cancer growth and metastasis, and wherein TGFβ reduction results in amelioration of the condition.

27. The method of claim 26, wherein the fibrotic disorder is selected from the group consisting of airway fibrosis, idiopathic pulmonary fibrosis, non-specific interstitial pneumonia, post-infectious lung fibrosis, diffuse alveolar damage, collagen-vascular disease associated lung fibrosis, drug-induced lung fibrosis, silicosis, asbestos-related lung fibrosis, respiratory bronchiolitis, respiratory bronchiolitis interstitial lung disease, desquamative interstitial fibrosis, cryptogenic organizing pneumonia, chronic hypersensitivity pneumonia, drug-related lung fibrosis, renal fibrosis, and liver fibrosis.

## CLAIMS

1. An invention not claimed in any divisional application.