~~Claims~~

~~1. An antibody that specifically binds to Fibroblast Activation Protein (FAP), wherein said antibody comprises a heavy chain variable region comprising~~

~~(a) a heavy chain CDR1 selected from the group of SEQ ID NO: 3, SEQ ID NO: 5, SEQ ID NO: 7, SEQ ID NO: 9, SEQ ID NO: 11, SEQ ID NO: 13, SEQ ID NO: 15, SEQ ID NO: 17, SEQ ID NO: 19, SEQ ID NO:21, SEQ ID NO: 23, SEQ ID NO: 25, SEQ ID NO: 27, SEQ ID NO: 29, SEQ ID NO: 31, and SEQ ID NO: 33;~~

(b) a heavy chain CDR2 selected from the group of SEQ ID NO: 35, SEQ ID NO: 37, SEQ ID NO: 39, SEQ ID NO: 41, SEQ ID NO: 43, SEQ ID NO: 45, SEQ ID NO: 47, SEQ ID NO: 49, SEQ ID NO: 51, SEQ ID NO: 53, SEQ ID NO: 55, SEQ ID NO: 57, SEQ ID NO: 59, SEQ ID NO: 61, SEQ ID NO: 63, SEQ ID NO: 65, SEQ ID NO: 67, SEQ ID NO: 69, SEQ ID NO: 71, SEQ ID NO: 73, SEQ ID NO: 75, SEQ ID NO: 77, SEQ ID NO: 79, SEQ ID NO: 81, SEQ ID NO: 83, SEQ ID NO: 85, SEQ ID NO: 87, SEQ ID NO: 89, SEQ ID NO: 91, SEQ ID NO: 93, SEQ ID NO: 95, SEQ ID NO: 97, SEQ ID NO: 99, SEQ ID NO: 101, SEQ ID NO: 103, SEQ ID NO: 105, SEQ ID NO: 107, SEQ ID NO: 109, SEQ ID NO: 111, SEQ ID NO: 113, SEQ ID NO: 115, SEQ ID NO: 117, SEQ ID NO: 119, SEQ ID NO: 121, SEQ ID NO: 123, SEQ ID NO: 125, SEQ ID NO: 127, SEQ ID NO: 129, SEQ ID NO: 131, and SEQ ID NO: 133; and

(c) a heavy chain CDR3 selected from the group of SEQ ID NO: 135, SEQ ID NO: 137, SEQ ID NO: 139, and SEQ ID NO: 141;

and wherein said antibody comprises a light chain variable region comprising

(a) a light chain CDR1 selected from the group of SEQ ID NO: 143, SEQ ID NO: 145, SEQ ID NO: 147, and SEQ ID NO: 149;

(b) a light chain CDR2 selected from the group of SEQ ID NO: 151, SEQ ID NO: 153, SEQ ID NO: 155, SEQ ID NO: 157, SEQ ID NO: 159, and SEQ ID NO: 161; and

(c) a light chain CDR3 selected from the group of SEQ ID NO: 163, SEQ ID NO: 165, SEQ ID NO: 167, SEQ ID NO: 169, SEQ ID NO: 171, SEQ ID NO: 173, SEQ ID NO: 175, and SEQ ID NO: 177;

and wherein said antibody comprises at least one heavy or light chain CDR which is not a CDR selected from the group of SEQ ID NO: 3, SEQ ID NO: 5, SEQ ID NO: 13, SEQ ID NO: 15, SEQ ID NO: 23, SEQ ID NO: 25, SEQ ID NO: 27, SEQ ID NO: 35, SEQ ID NO: 37, SEQ ID NO: 39, SEQ ID NO: 41, SEQ ID NO: 69, SEQ ID NO: 71, SEQ ID NO: 73, SEQ ID NO: 75, SEQ ID NO: 101, SEQ ID NO: 103, SEQ ID NO: 105, SEQ ID NO: 107, SEQ ID NO: 135, SEQ ID NO: 137, SEQ ID NO: 139, SEQ ID NO: 141, SEQ ID NO: 143, SEQ ID NO: 145, SEQ ID NO: 147, SEQ ID NO: 149, SEQ ID NO: 151, SEQ ID NO: 153, SEQ ID NO: 155, SEQ ID NO: 157, SEQ ID NO: 159, SEQ ID NO: 161, SEQ ID NO: 163, SEQ ID NO: 165, SEQ ID NO: 167, SEQ ID NO: 169, SEQ ID NO: 171, SEQ ID NO: 173, and SEQ ID NO: 175.

2. The antibody of claim 1, wherein said antibody comprises at least one CDR selected from the group of SEQ ID NO: 7, SEQ ID NO: 9, SEQ ID NO: 11, SEQ ID NO: 17, SEQ ID NO: 19, SEQ ID NO: 21, SEQ ID NO: 29, SEQ ID NO: 31, SEQ ID NO: 33, SEQ ID NO: 43, SEQ ID NO: 45, SEQ ID NO: 47, SEQ ID NO: 49, SEQ ID NO: 51, SEQ ID NO: 53, SEQ ID NO: 55, SEQ ID NO: 57, SEQ ID NO: 59, SEQ ID NO: 61, SEQ ID NO: 63, SEQ ID NO: 65, SEQ ID NO: 67, SEQ ID NO: 77, SEQ ID NO: 79, SEQ ID NO: 81, SEQ ID NO: 83, SEQ ID NO: 85, SEQ ID NO: 87, SEQ ID NO: 89, SEQ ID NO: 91, SEQ ID NO: 93, SEQ ID NO: 95, SEQ ID NO: 97, SEQ ID NO: 99, SEQ ID NO: 109, SEQ ID NO: 111, SEQ ID NO: 113, SEQ ID NO: 115, SEQ ID NO: 117, SEQ ID NO: 119, SEQ ID NO: 121, SEQ ID NO: 123, SEQ ID NO: 125, SEQ ID NO: 127, SEQ ID NO: 129, SEQ ID NO: 131, SEQ ID NO: 133 and SEQ ID NO: 177.

3. The antibody of claim 1 or 2, wherein said antibody comprises a heavy chain variable region comprising an amino acid sequence having at least 95% identity to a sequence selected from the group of: SEQ ID NO: 197, SEQ ID NO: 201, SEQ ID NO: 203, SEQ ID NO: 207, SEQ ID NO: 211, SEQ ID NO: 215, SEQ ID NO: 219, SEQ ID NO: 223, SEQ ID NO: 227, SEQ ID NO: 231, SEQ ID NO: 235, SEQ ID NO: 239, SEQ ID NO: 243, SEQ ID NO: 247, SEQ ID NO: 251, SEQ ID NO: 255, SEQ ID NO: 259, SEQ ID NO: 263, SEQ ID NO: 267, SEQ ID NO: 271, SEQ ID NO: 275, SEQ ID NO: 279, SEQ ID NO: 283, SEQ ID NO: 287, SEQ ID NO: 291, SEQ ID NO: 295, SEQ ID NO: 299, SEQ ID NO: 303, SEQ ID NO: 307, and SEQ ID NO: 311;

and a light chain variable region comprising an amino acid sequence having at least 95% identity to a sequence selected from the group of: SEQ ID NO: 193, SEQ ID NO: 195, SEQ ID NO: 199, SEQ ID NO: 205, SEQ ID NO: 209, SEQ ID NO: 213, SEQ ID NO: 217, SEQ ID NO: 221, SEQ ID NO: 225, SEQ ID NO: 229, SEQ ID NO: 233, SEQ ID NO: 237, SEQ ID NO: 241, SEQ ID NO: 245, SEQ ID NO: 249, SEQ ID NO: 253, SEQ ID NO: 257, SEQ ID NO: 261, SEQ ID NO: 265, SEQ ID NO: 269, SEQ ID NO: 273, SEQ ID NO: 277, SEQ ID NO: 281, SEQ ID NO: 285, SEQ ID NO: 289, SEQ ID NO: 293, SEQ ID NO: 297, SEQ ID NO: 301, SEQ ID NO: 305, and SEQ ID NO: 309;

wherein said antibody comprises at least one heavy or light chain variable region which does not comprise an amino acid sequence selected from the group of SEQ ID NO: 193, SEQ ID NO: 195, SEQ ID NO: 197, SEQ ID

~~NO: 199, SEQ ID NO: 201, SEQ ID NO: 203, SEQ ID NO: 205, SEQ ID NO: 207, SEQ ID NO: 209, SEQ ID NO: 211, SEQ ID NO: 213, SEQ ID NO: 215, SEQ ID NO: 217, SEQ ID NO: 219, SEQ ID NO: 221, SEQ ID NO: 223, SEQ ID NO: 225, SEQ ID NO: 227, SEQ ID NO: 229, SEQ ID NO: 231, SEQ ID NO: 233, SEQ ID NO: 235, SEQ ID NO: 237, SEQ ID NO: 239, SEQ ID NO: 241, SEQ ID NO: 243, SEQ ID NO: 245, SEQ ID NO: 247, SEQ ID NO: 249, SEQ ID NO: 251, SEQ ID NO: 253, and SEQ ID NO: 255.~~

~~4. The antibody of claim 3, wherein said antibody comprises at least one variable region comprising an amino acid sequence selected from the group of SEQ ID NO: 259, SEQ ID NO: 263, SEQ ID NO: 267, SEQ ID NO: 271, SEQ ID NO: 275, SEQ ID NO:279, SEQ ID NO:283, SEQ ID NO: 287, SEQ ID NO: 291, SEQ ID NO: 293, SEQ ID NO: 299, SEQ ID NO: 303, SEQ ID NO: 307, and SEQ ID NO: 311.~~

Claims

~~5.~~1. ~~The~~ An antibody that specifically binds to Fibroblast Activation Protein (FAP), wherein said antibody comprises (i) a heavy chain variable region comprising~~of any one of claims 1-4, wherein said antibody comprises a heavy chain variable region comprising~~ a heavy chain CDR1 selected from the group of SEQ ID NO: 3, SEQ ID NO: 13, and SEQ ID NO: 23; a heavy chain CDR2 selected from the group of SEQ ID NO: 47, SEQ ID NO: 81, and SEQ ID NO: 113; and the heavy chain CDR3 of SEQ ID NO: 135, and a light chain variable region comprising the light chain CDR1 of SEQ ID NO: 143, the light chain CDR2 of SEQ ID NO: 151, and the light chain CDR3 of SEQ ID NO: 163~~.~~,

~~6. The antibody of any one of claims 1 to 4, wherein said antibody comprises~~ or (ii) a heavy chain variable region comprising a heavy chain CDR1 selected from the group of SEQ ID NO: 9, SEQ ID NO: 19, and SEQ ID NO: 31; a heavy chain CDR2 selected from the group of SEQ ID NO: 61, SEQ ID NO: 95, and SEQ ID NO: 127; and the heavy chain CDR3 of SEQ ID NO: 137, and a light chain variable region comprising the light chain CDR1 of SEQ ID NO: 147, the light chain CDR2 of SEQ ID NO: 155, and the light chain CDR3 of SEQ ID NO: 167.

~~7.~~2. The antibody of ~~any one of~~ claims ~~1~~(i)~~-5~~, wherein said antibody comprises a heavy chain variable region ~~comprising the amino acid sequence~~ of SEQ ID NO: 267 and a light chain variable region ~~comprising the amino acid sequence~~ of SEQ ID NO: 265.

~~8.~~3. The antibody of ~~any one of~~ claims ~~1~~(ii)~~-4 or 6~~, wherein said antibody comprises a heavy chain variable region ~~comprising the amino acid sequence~~ of SEQ ID NO: 299, and a light chain variable region ~~comprising the amino acid sequence~~ of SEQ ID NO: ~~205~~297.

~~9.~~4. The antibody of any one of claims 1 to ~~8~~3, wherein said antibody comprises an Fc region ~~or a region equivalent to the Fc region~~ of an immunoglobulin.

~~10. An antibody that specifically binds to Fibroblast Activation Protein (FAP), wherein said antibody comprises a heavy chain variable region comprising a heavy chain CDR1 selected from the group of SEQ ID NO: 3, SEQ ID NO: 5, SEQ ID NO: 13, SEQ ID NO: 15, SEQ ID NO: 23, SEQ ID NO: 25, and SEQ ID NO: 27; a heavy chain CDR2 selected from the group of SEQ ID NO: 35, SEQ ID NO: 37, SEQ ID NO: 39, SEQ ID NO: 41, SEQ ID NO: 69, SEQ ID NO: 71, SEQ ID NO: 73, SEQ ID NO: 75, SEQ ID NO: 101, SEQ ID NO: 103, SEQ ID NO: 105, and SEQ ID NO: 107; and a heavy chain CDR3 selected from the group of SEQ ID NO: 135, SEQ ID NO: 137, SEQ ID NO: 139, and SEQ ID NO: 141, a light chain variable region comprising a light chain CDR1 selected from the group of SEQ ID NO: 143, SEQ ID NO: 145, SEQ ID NO: 147, and SEQ ID NO: 149; a light chain CDR2 selected from the group of SEQ ID NO: 151, SEQ ID NO: 153, SEQ ID NO: 155, SEQ ID NO: 157, SEQ ID NO: 159, and SEQ ID NO: 161; and a light chain CDR3 selected from the group of SEQ ID NO: 163, SEQ ID NO: 165, SEQ ID NO: 167, SEQ ID NO: 169, SEQ ID NO: 171, SEQ ID NO: 173, and SEQ ID NO: 175; and an Fc region or a region equivalent to the Fc region of an immunoglobulin.~~

~~11. The antibody of claim 10, wherein said antibody comprises a heavy chain variable region comprising an amino acid sequence that is at least about 95% identical to a sequence selected from the group of SEQ ID NO: 197, SEQ ID NO: 201, SEQ ID NO: 203, SEQ ID NO: 207, SEQ ID NO: 211, SEQ ID NO: 215, SEQ ID NO: 219, SEQ ID NO: 223, SEQ ID NO: 227, SEQ ID NO: 231, SEQ ID NO: 235, SEQ ID NO: 239, SEQ ID NO: 243, SEQ ID NO: 247, SEQ ID NO: 251, and SEQ ID NO: 255, and a light chain variable region comprising an amino acid sequence that is at least about 95% identical to a sequence selected from the group of: SEQ ID NO: 193, SEQ ID NO: 195, SEQ ID NO: 199, SEQ ID NO: 205, SEQ ID NO: 209, SEQ ID NO: 213, SEQ ID NO: 217, SEQ ID NO: 221, SEQ ID NO: 225, SEQ ID NO: 229, SEQ ID NO: 233, SEQ ID NO: 237, SEQ ID NO: 241, SEQ ID NO: 245, SEQ ID NO: 249, and SEQ ID NO: 253.~~

~~12.~~5. ~~The~~ An antibody ~~of~~ that specifically binds to Fibroblast Activation Protein (FAP), wherein said antibody comprises (i) a heavy chain variable region comprising~~claim 10 or 11, wherein said antibody comprises a heavy chain variable region comprising~~ a heavy chain CDR1 selected from the group of SEQ ID NO: 3, SEQ ID NO: 13, and SEQ ID NO: 23; a heavy chain CDR2 selected from the group of SEQ ID NO: 35, SEQ ID NO: 69, and SEQ ID NO: 101; and the heavy chain CDR3 of SEQ ID NO:

137, and a light chain variable region comprising the light chain CDR1 of SEQ ID NO: 147, the light chain CDR2 of SEQ ID NO: 155, and the light chain CDR3 of SEQ ID NO: 167~~.~~, or (ii) a heavy chain CDR1 selected from the group of SEQ ID NO: 3, SEQ ID NO: 13, and SEQ ID NO: 23; a heavy chain CDR2 selected from the group of SEQ ID NO: 35, SEQ ID NO: 69, and SEQ ID NO: 101; and the heavy chain CDR3 of SEQ ID NO: 135, and a light chain variable region comprising the light chain CDR1 of SEQ ID NO: 143, the light chain CDR2 of SEQ ID NO: 151, and the light chain CDR3 of SEQ ID NO: 163; and an Fc region of an immunoglobulin.

~~13.~~6. The antibody of ~~any one of~~ claims ~~10-12~~5(i), wherein said antibody comprises a heavy chain variable region ~~comprising the amino acid sequence~~ of SEQ ID NO:207, and a light chain variable region ~~comprising the amino acid sequence~~ of SEQ ID NO: 205.

7. The antibody of claim 5(ii), wherein said antibody comprises a heavy chain variable region of SEQ ID NO: 197, and a light chain variable region of SEQ ID NO: 195.

~~14.~~8. The antibody of any one of claims ~~9-13~~4-7, wherein said Fc region is an IgG Fc region.

~~15.~~9. The antibody of any one of claims 1 to ~~14~~8, wherein said antibody is a full-length IgG class antibody.

~~16.~~10. The antibody of any one of claims 1 to ~~15~~9, wherein said antibody comprises a human constant region.

~~17.~~11. The antibody of any one of claims 1 to ~~16~~10, wherein said antibody is a human antibody.

~~18.~~12. The antibody of any one of claims 1 to ~~17~~11, wherein said antibody comprises a glycoengineered Fc region.

~~19.~~13. The antibody of claim ~~18~~12, wherein said antibody has an increased proportion of non-fucosylated oligosaccharides in said Fc region, as compared to a non-glycoengineered antibody.

~~20.~~14. The antibody of claims ~~18~~-12 or ~~19~~13, wherein at least about 20% to about 100% of the N-linked oligosaccharides in said Fc region are non-fucosylated.

~~21.~~15. The antibody of any one claims ~~18~~-12 to ~~20~~14, wherein said antibody has an increased proportion of bisected oligosaccharides in said Fc region, as compared to a non-glycoengineered antibody.

~~22.~~16. The antibody of any one of claims ~~18~~-12 to ~~21~~15, wherein at least about 20% to about 100% of the N-linked oligosaccharides in said Fc region are bisected.

~~23.~~17. The antibody of any one of claims ~~18~~-12 to ~~22~~16, wherein at least about 20% to about 50% of the N-linked oligosaccharides in said Fc region are bisected, non-fucosylated.

~~24.~~18. The antibody of any one of claims 1 to ~~23~~17, wherein said antibody has increased effector function and/or increased Fc receptor binding affinity.

~~25.~~19. The antibody of claim ~~24~~18, wherein said increased effector function is increased ADCC.

~~26. The antibody of any one of claims 1 to 25, wherein said antibody is affinity matured.~~

~~27. The antibody of any one of claims 1 to 26, wherein said antibody binds to FAP with a K_D value lower than about 1 μM.~~

~~28. The antibody of any one of claims 1 to 27, wherein said antibody binds FAP in human tissue.~~

~~29. The antibody of any one of claims 1 to 28, wherein said antibody shows no substantial cross-reactivity for DPPIV/CD26.~~

~~30. The antibody of any one of claims 1 to 29, wherein said antibody does not induce internalization of FAP upon binding to FAP expressed on the surface of a cell.~~

~~31.~~20. An isolated polynucleotide encoding an antibody heavy chain and/or an antibody light chain ~~a polypeptide~~ that forms part of the antibody according to any one of claims 1 to ~~30~~19.

~~32.~~21. An isolated polypeptide encoded by the polynucleotide of claim ~~31~~20.

~~33.~~22. A composition comprising (i) a first isolated polynucleotide encoding a polypeptide comprising ~~a~~ the sequence ~~selected from the group~~ of ~~SEQ ID NO: 197, SEQ ID NO: 201, SEQ ID NO: 203, SEQ ID NO: 207, SEQ ID NO: 211, SEQ ID NO: 215, SEQ ID NO: 219, SEQ ID NO: 223, SEQ ID NO: 227, SEQ ID NO: 231, SEQ ID NO: 235, SEQ ID NO: 239, SEQ ID NO: 243, SEQ ID NO: 247, SEQ ID NO: 251, SEQ ID NO: 255, SEQ ID NO: 259, SEQ ID NO: 263,~~ SEQ ID NO: 267, ~~SEQ ID NO: 271, SEQ ID NO: 275, SEQ ID NO: 279, SEQ ID NO: 283, SEQ ID NO: 287, SEQ ID NO: 291, SEQ ID NO: 295, SEQ ID NO: 299, SEQ ID NO: 303, SEQ ID NO: 307, and SEQ ID NO: 311,~~ and a second isolated polynucleotide encoding a polypeptide comprising ~~a~~ the sequence ~~selected from the group~~ of ~~SEQ ID NO: 193, SEQ ID NO: 195, SEQ ID NO: 199, SEQ ID NO: 205, SEQ ID NO: 209, SEQ ID NO: 213, SEQ ID NO: 217, SEQ ID NO: 221, SEQ ID NO: 225, SEQ ID NO: 229, SEQ ID NO: 233, SEQ ID NO: 237, SEQ ID NO: 241, SEQ ID NO: 245, SEQ ID NO: 249, SEQ ID NO: 253, SEQ ID NO: 257, SEQ ID NO: 261,~~ SEQ ID NO: 265, ~~SEQ ID NO: 269, SEQ ID NO: 273, SEQ ID NO: 277, SEQ ID NO: 281, SEQ ID NO: 285, SEQ ID NO: 289, SEQ ID NO: 293, SEQ ID NO: 297, SEQ ID NO: 301, SEQ ID NO: 305, and SEQ ID NO: 309~~(ii) a first isolated polynucleotide encoding a polypeptide comprising the sequence of SEQ ID NO: 299 and a second isolated polynucleotide encoding a polypeptide comprising the sequence of SEQ ID NO: 297, (iii) a first isolated polynucleotide encoding a polypeptide comprising the sequence of SEQ ID NO: 197 and a second isolated polynucleotide encoding a polypeptide comprising the sequence of SEQ ID NO: 195, or (iv) a first isolated polynucleotide encoding a polypeptide comprising the sequence of SEQ ID NO: 207 and a second isolated polynucleotide encoding a polypeptide comprising the sequence of SEQ ID NO: 205.

~~34.~~23. A vector comprising the polynucleotide of claim ~~31~~20.

~~35.~~24. A host cell comprising the polynucleotide of claim ~~31~~20, the composition of claim ~~33~~22, or the vector of claim ~~34~~23.

~~36.~~25. The host cell of claim ~~35~~24, wherein said host cell has been manipulated to express increased levels of one or more polypeptides having GnTIII activity.

~~37.~~26. The host cell of claim ~~36~~25, wherein said polypeptide having GnTIII activity is a fusion polypeptide comprising the catalytic domain of GnTIII and the Golgi localization domain of ManII.

~~38.~~27. The host cell of claim ~~36~~ 25 or ~~37~~26, wherein said host cell has been further manipulated to express increased levels of one or more polypeptides having ManII activity.

~~39.~~28. A method of producing an antibody that specifically binds to Fibroblast Activation Protein (FAP), said method comprising

a) culturing the host cell of claim ~~35~~ 24 in a medium under conditions allowing the expression of the antibody, and

b) recovering the antibody.

~~40.~~29. A method of producing an antibody that specifically binds to Fibroblast Activation Protein (FAP), said method comprising

a) culturing the host cell of any one of claims ~~36~~ 25 to ~~38~~ 27 in a medium under conditions allowing the expression of the antibody and the modification of the oligosaccharides present on the Fc region of said antibody by said polypeptide having GnTIII activity, and

b) recovering the antibody

~~41.~~30. An antibody that specifically binds to FAP, wherein said antibody is produced by the method of claim ~~39~~ 28 or ~~40~~29.

~~42.~~31. An antibody conjugate comprising the antibody of any one of claims 1 to ~~30~~ 19 and a cytotoxic agent.

~~43.~~32. A pharmaceutical formulation comprising the antibody of any one of claims 1 to ~~30~~ 19 and a pharmaceutically acceptable carrier.

~~44.~~33. The pharmaceutical formulation of claim ~~43~~32, further comprising an additional therapeutic agent.

~~45.~~34. The antibody of any one of claims 1 to ~~30~~ 19 for use as a medicament.

~~46.~~35. The antibody of any one of claims 1 to ~~30~~ 19 for the treatment of a disease characterized by expression of FAP.

~~47.~~36. The antibody of claim ~~46~~35, wherein said disease is cancer.

~~48.~~37. The antibody of any one of claims 1 to ~~30~~ 19 for use in inducing cell lysis of a tumor cell or a stromal cell of a tumor.

~~49.~~38. Use of the antibody of any one of claims 1 to ~~30~~ 19 in the manufacture of a medicament.

~~50.~~39. Use of the antibody of any one of claims 1 to ~~30~~ 19 for the manufacture of a medicament for treatment of a disease characterized by expression of FAP.

~~51.~~40. The use of claim ~~50~~39, wherein said medicament further comprises an additional therapeutic agent.

~~52.~~41. The use of claim ~~50~~ 39 or ~~51~~40, wherein said disease is cancer.

~~53.~~42. Use of the antibody of any one of claims 1 to ~~30~~ 19 for the manufacture of a medicament for inducing lysis of a tumor cell or a stromal cell of a tumor.

~~54.~~43. The use of claim ~~53~~42, wherein said cell lysis is induced by antibody dependent cytotoxicity of the antibody.

44. The antibody of any one of claims 1 to 19 for use in a method of diagnosis or detection.

~~55~~45. A diagnostic agent comprising the antibody of any one of claims 1 to 19 and a label that allows detection of a complex of said diagnostic agent and FAP.