WHAT IS CLAIMED IS:

1. An ~~antigen-binding protein~~ antibody comprising a CDRH1, a CDRH2, a CDRH3, a CDRL1, a CDRL2, and a CDRL3, wherein~~each comprising~~ the amino acid sequence of the CDRH1, CDRH2, CDRH3, CDRL1, CDRL2, and CDRL3 is selected from any single line of the following Table~~as specified in a line of the following Table~~:

Ref. No.	Full Heavy Chain SEQ ID NO:	Full Light Chain SEQ ID NO:	Variable Heavy Chain SEQ ID NO:	Variable Light Chain SEQ ID NO:	CDRH1 SEQ D NO:	CDRH2 SEQ ID NO:	CDRH3 SEQ ID NO:	CDRL1 SEQ ID NO:	CDRL2 SEQ ID NO:	CDRL3 SEQ ID NO:
1.2	11	43	77	109	147	163	186	193	214	228
1.2 SM	11	44	77	110	147	163	186	193	214	228
1.26	12	67	78	133	137	150	166	198	216	233
1.27	13	45	79	111	137	150	189	198	216	233
1.30	14	46	80	112	147	163	186	195	214	228
1.39	18	49	84	115	137	152	170	198	216	233
1.42	19	50	85	116	147	163	186	194	214	228
1.64	20	51	86	117	141	156	172	209	223	245
1.66	21	52	87	118	143	160	182	203	216	240
1.109	4	36	70	102	140	155	169	202	218	236
1.109 SM	4	37	70	103	140	155	169	201	218	236
1.134	7	39	73	105	143	158	190	199	219	237
1.143	8	40	74	106	137	151	167	199	217	233
2.103	23	55	89	121	137	150	173	198	216	233
2.360	27	57	93	123	142	157	187	206	221	242
2.360 SM	28	58	94	124	142	157	187	206	221	242
2.475	31	61	97	127	143	158	177	200	216	235
2.508	32	62	98	128	142	157	176	207	224	243
2.534	33	63	99	129	136	149	171	208	222	244

2. The ~~antigen-binding protein~~ antibody of claim 1 that comprises a VH and a VL, wherein the amino acid sequence of the VH and the VL ~~each comprise~~is selected from ~~the amino acid sequence as specified in a~~ any single line of the Table of claim 1.

3. The ~~antigen binding protein~~antibody of claim 2 that ~~is an antibody that~~ comprises two identical VH and two identical VL, wherein the amino acid sequence of the VH and VL is selected from any single~~comprise the amino acid sequence as specified in a~~ line of the Table of claim 1.

4. The ~~antigen binding protein~~ antibody of claim 2 or claim 3 that ~~is an antibody that~~ comprises a full heavy chain and a full light chain, wherein ~~each comprising~~ the amino acid sequence of the full heavy chain and the full light chain is selected from any single~~as specified in a~~ line of the Table of claim 1.

5. The ~~antigen binding protein~~ antibody of any one of claims 1-4, wherein said ~~antigen binding protein~~ antibody comprises a CDRH1, a CDRH2, a CDRH3, a CDRL1, a CDRL2, and a CDRL3, wherein ~~each comprising~~ the amino acid sequence of the CDRH1, CDRH2, CDRH3, CDRL1, CDRL2, and CDRL3 is selected from any single line ~~as specified in a line~~ of the following Table:

Ref. No.	Full Heavy Chain SEQ ID NO:	Full Light Chain SEQ ID NO:	Variable Heavy Chain SEQ ID NO:	Variable Light Chain SEQ ID NO:	CDRH1 SEQ D NO:	CDRH2 SEQ ID NO:	CDRH3 SEQ ID NO:	CDRL1 SEQ ID NO:	CDRL2 SEQ ID NO:	CDRL3 SEQ ID NO:
1.2	11	43	77	109	147	163	186	193	214	228
1.2 SM	11	44	77	110	147	163	186	193	214	228
1.109	4	36	70	102	140	155	169	202	218	236
1.109 SM	4	37	70	103	140	155	169	201	218	236
2.360	27	57	93	123	142	157	187	206	221	242
2.360 SM	28	58	94	124	142	157	187	206	221	242

6. The ~~antigen binding protein~~ antibody of any one of claims 1-5, wherein said ~~antigen binding protein is an antibody that~~ antibody comprises a heavy chain variable region and a light chain variable region each, wherein ~~comprising~~ the amino acid sequence of the antibody is selected from any single line ~~as specified in a line~~ of the following Table:

Ref. No.	Full Heavy Chain SEQ ID NO:	Full Light Chain SEQ ID NO:	Heavy Chain Variable Region SEQ ID NO:	Light Chain Variable Region SEQ ID NO:	CDRH1 SEQ D NO:	CDRH2 SEQ ID NO:	CDRH3 SEQ ID NO:	CDRL1 SEQ ID NO:	CDRL2 SEQ ID NO:	CDRL3 SEQ ID NO:
1.2	11	43	77	109	147	163	186	193	214	228
1.2 SM	11	44	77	110	147	163	186	193	214	228
1.109	4	36	70	102	140	155	169	202	218	236
1.109 SM	4	37	70	103	140	155	169	201	218	236
2.360	27	57	93	123	142	157	187	206	221	242
2.360 SM	28	58	94	124	142	157	187	206	221	242

7. The ~~antigen-binding protein~~ antibody of any one of claims 1-6, wherein said ~~antigen-binding protein is an antibody that~~ antibody comprises a full heavy chain and a full light chain each, wherein ~~comprising~~ the amino acid sequence of each the full heavy chain and the full light chain is as specified in the following Table:

Ref. No.	Full Heavy Chain SEQ ID NO:	Full Light Chain SEQ ID NO:	Heavy Chain Variable Region SEQ ID NO:	Light Chain Variable Region SEQ ID NO:	CDRH1 SEQ D NO:	CDRH2 SEQ ID NO:	CDRH3 SEQ ID NO:	CDRL1 SEQ ID NO:	CDRL2 SEQ ID NO:	CDRL3 SEQ ID NO:
1.2	11	43	77	109	147	163	186	193	214	228
1.2 SM	11	44	77	110	147	163	186	193	214	228
1.109	4	36	70	102	140	155	169	202	218	236
1.109 SM	4	37	70	103	140	155	169	201	218	236
2.360	27	57	93	123	142	157	187	206	221	242
2.360 SM	28	58	94	124	142	157	187	206	221	242

8. An ~~antigen-binding protein~~antibody that competes with ~~an~~ a reference antibody for binding to the extracellular portion of human c-fms, wherein said reference antibody is the ~~antigen-binding protein~~antibody according to any one of claims ~~5~~ 6 to 7.

~~9. A human antigen binding protein that binds to human c-fms polypeptide, wherein the binding between said human antigen binding protein and a mutant human c-fms is less than 50% of the binding between said human antigen binding protein and the human c-fms of SEQ ID NO:1, and wherein said mutant human c-fms comprises:~~

~~(a) at least one mutation of a residue at a position selected from 102, 144, 146, 174, and 226 as shown in SEQ ID NO:1;~~

~~(b) at least one mutation selected from K102E, R144E, R146E, D174R, and A226R;~~

~~(c) at least one mutation selected from E29R, Q121R, T152R, and K185E;~~

~~(d) at least one mutation selected from E29R, Q121R, S172R, G274R, and Y276R; or~~

~~(e) at least one mutation selected from R106E, H151R, T152R, Y154R, S155R, W159R, Q171R, S172R, Q173R, G183R, R184E, K185E, E218R, A220R, S228R, H239R, N240R, K259E, G274R, N275R, Y276R, S277R, and N282R.~~

9. An antibody that competes with a reference antibody for binding to the extracellular portion of human c-fms, wherein said reference antibody is the antibody according to claim 5.

10. An ~~antigen binding protein~~antibody which is capable of binding a polypeptide consisting of the amino acid sequence SEQ ID NO:326, but does not bind a polypeptide consisting of amino acids 20-126 of SEQ ID NO:1, and does not bind a polypeptide consisting of amino acids 85-223 of SEQ ID NO:1.

11. The ~~antigen binding protein~~antibody of claim 10, which is capable of binding an epitope composed three-dimensionally of the human c-fms Ig-like domain 1 and Ig-like domain 2 in combination, but does not bind a polypeptide containing either the Ig-like domain 1 or the Ig-like domain 2 alone.

12. The antigen binding protein of any one of claims 8 to 11 that competes for specific binding to c-fms with the ~~antigen binding protein~~ antibody according to any one of claims 5 to 7.

~~13. The antigen binding protein of any one of claims 8 to 12, wherein the polypeptide structure of said antigen binding protein is based on:~~

~~(a) antibodies and fragments thereof; or~~

~~(b) monoclonal antibodies, bispecific antibodies, minibodies, domain antibodies, synthetic antibodies, chimeric antibodies, humanized antibodies, human antibodies, antibody fusions, and fragments thereof.~~

~~14~~13. The ~~antigen binding protein~~antibody of any one of claims 1 to ~~13~~12 which is a human ~~antigen binding protein~~antibody.

~~15~~14. The ~~antigen binding protein~~antibody of any one of claims 1 to ~~14~~13 which is an ~~antibody or a~~ antibody fragment ~~thereof~~.

~~16~~15. The ~~antigen binding protein~~ antibody of claim ~~15~~ 14which:

(a) is a monoclonal antibody, a recombinant antibody, ~~a human antibody,~~ a humanized antibody, a chimeric antibody, a multispecific antibody, or a fragment thereof;

(b) is of the IgG1-, IgG2-, IgG3-, or the IgG4-type;

(c) is an Fab fragment, an Fab' fragment, an $F(ab')_2$ fragment, an Fv fragment, a diabody, a domain antibody, or a single chain antibody molecule; or

(d) is an immunologically functional immunoglobulin fragment and derived from a mammalian source selected from human, mouse, rat, camelid and rabbit.

~~17~~16. A nucleic acid encoding the ~~antigen binding protein~~antibody according to any one of claims 1 to ~~16~~15, optionally wherein said nucleic acid is operably linked to a control sequence.

~~18~~17. A vector comprising the nucleic acid according to claim ~~17~~16.

~~19~~18. A host cell comprising the vector according to claim ~~18~~17 and/or the nucleic acid according to claim ~~17~~16.

~~20~~19. A pharmaceutical composition comprising at least one ~~antigen binding protein~~ antibody according to any one of claims 1 to ~~16~~15, and a pharmaceutically acceptable excipient.

~~21~~20. The pharmaceutical composition of claim ~~20~~19, further comprising:

(a) a further active agent;

(b) a further active agent selected from the group consisting of a radioisotope, a radionuclide, a toxin, a therapeutic and a chemotherapeutic group; or

(c) a further active agent selected from the group consisting of an anti-inflammatory agent, a cancer therapy agent, a bone growth promoting (anabolic) agent, a bone anti-resorptive agent, an agent that inhibits osteoclast activity and an agent that enhances osteoblast activity.

~~22~~21. The ~~antigen binding protein~~ antibody of any one of claims 1 to ~~16~~15 for use in therapy.

~~23~~22. The ~~antigen binding protein~~antibody according to claim ~~22~~21, wherein the ~~antigen binding protein~~antibody is to be administered in combination with:

(a) a further active agent;

(b) a further active agent which is an anti-inflammatory agent;

(c) a further active agent which is a cancer therapy agent;

(d) a further active agent selected from a bone growth promoting (anabolic) agent and a bone anti-resorptive agent;

(e) a further active agent selected from an agent that inhibits osteoclast activity and an agent that enhances osteoblast activity; or

(f) a further active agent selected from a radioisotope, a radionuclide, a toxin, a therapeutic and a chemotherapeutic group.

~~24~~23. Use of the ~~antigen binding protein~~antibody of any one of claims 1 to ~~16~~15 in the manufacture of a medicament for treating or preventing a condition associated with c-fms in a patient, wherein the condition is selected from cancer, bone disease, and inflammatory disease.

~~25~~24. The use of claim ~~24~~23, wherein the cancer is selected from the group consisting of breast cancer, prostate cancer, colorectal cancer, endometrial adenocarcinoma, leukemia, lymphoma, melanoma, esophageal cancer, squamous cell cancer, gastric cancer, astrocytic cancer, endometrial cancer, cervical cancer, bladder cancer, renal cancer, lung cancer and ovarian cancer.

~~26~~25. The use of claim ~~24~~23, wherein the bone disease is selected from the group consisting of:

(a) medical disorders that involve excessive bone loss;

(b) medical disorders that require the formation of new bone;

(c) medical disorders that involve excessive osteoclast activity;

(d) osteopenic disorders;

(e) systemic bone loss associated with arthritis; and

(f) bone disease associated with renal failure.

~~27~~26. The use of claim ~~26~~25, wherein the medical disorder is selected from breast cancer, prostate cancer, multiple myeloma and osteosarcoma; or wherein the osteopenic disorder is selected from the group consisting of osteopenia, osteoporosis, periodontitis, Paget's disease, bone loss due to immobilization, lytic bone metastases, and arthritis.

~~28~~27. The use of claim ~~26~~25 or claim ~~27~~26, wherein the arthritis is selected from the group consisting of osteoarthritis, rheumatoid arthritis, psoriatic arthritis, and inflammatory arthritis.

~~29~~28. The use according to any one of claims ~~24~~23 to ~~28~~27, wherein the ~~antigen binding protein~~antibody is administered in combination with:

(a) a further active agent;

(b) a further active agent which is an anti-inflammatory agent;

(c) a further active agent which is a cancer therapy agent;

(d) a further active agent selected from a bone growth promoting (anabolic) agent and a bone anti-resorptive agent;

(e) a further active agent selected from an agent that inhibits osteoclast activity and an agent that enhances osteoblast activity; or

(f) a further active agent selected from a radioisotope, a radionuclide, a toxin, a therapeutic and a chemotherapeutic group.

~~30~~29. The use according to claim ~~24~~23, wherein the inflammatory disease is selected from the group consisting of inflammatory bowel disease, Crohn's disease, ulcerative colitis, rheumatoid spondylitis, ankylosing spondylitis, arthritis, psoriatic arthritis, rheumatoid arthritis, osteoarthritis, eczema, contact dermatitis, psoriasis, toxic shock syndrome, sepsis, septic shock, endotoxic shock, asthma, chronic pulmonary inflammatory disease, silicosis, pulmonary sarcoidosis, restenosis, cardiac and renal reperfusion injury, thrombosis, glomerularonephritis, diabetes, graft vs. host reaction, allograft rejection, multiple sclerosis, muscle degeneration, muscular dystrophy, Alzheimer's disease and stroke.

~~31~~30. A method of preparing the ~~antigen binding protein~~antibody of any one of claims 1 to ~~16~~15, comprising the step of preparing said antigen binding protein from a host cell that secretes said ~~antigen binding protein~~antibody.

31. The antibody as defined in any one of the preceding claims, wherein the antibody binds specifically to c-fms with a K_D of less than 10^{-8}.