

Claims

[1] An antibody that binds specifically to human HLA/NY-ESO or the antigen-binding fragment thereof comprising:

a heavy chain variable region consisting of an amino acid sequence of amino acids 21 to 140 of the amino acid sequence as shown in SEQ ID NO: 53 and a light chain variable region consisting of an amino acid sequence of amino acids 156 to 266 of the amino acid sequence as shown in SEQ ID NO: 53, or

a heavy chain variable region consisting of an amino acid sequence of amino acids 21 to 140 of the amino acid sequence as shown in SEQ ID NO: 156 and a light chain variable region consisting of an amino acid sequence of amino acids 161 to 271 of the amino acid sequence as shown in SEQ ID NO: 156.

[2] The antibody or the antigen-binding fragment thereof according to Claim 1, which is scFv.

[3] The antibody or the antigen-binding fragment thereof according to Claim 2, which is scFv consisting of an amino acid sequence of amino acids 21 to 266 of the amino acid sequence as shown in SEQ ID NO: 53,
or

scFv consisting of an amino acid sequence of amino acids 21 to 271 of the amino acid sequence as shown in SEQ ID NO: 156.

[4] A polynucleotide encoding the antibody or the antigen-binding fragment thereof according to any one of Claims 1 to 3.

[5] A vector comprising the polynucleotide according to Claim 4.

[6] A host cell comprising the polynucleotide according to Claim 4 or the vector according to Claim 5.

[7] A method for producing an antibody that binds specifically to human HLA/NY-ESO or an antigen-binding fragment thereof comprising: (i) a step of culturing the host cell according to Claim 6; and (ii) a step of purifying an antibody or an antigen-binding fragment thereof from the culture product obtained in step (i).

[8] A pharmaceutical composition comprising, as an active ingredient, the antibody or the

antigen-binding fragment thereof according to any one of Claims 1 to 3, the polynucleotide according to Claim 4, the vector according to Claim 5, or the cell according to Claim 6.

[9] A molecule that binds specifically to human HLA/NY-ESO comprising the antibody or the antigen-binding fragment thereof according to any one of Claims 1 to 3.

[10] The molecule according to Claim 9, which is a multispecific antibody.

[11] The molecule according to Claim 9, which is a bispecific antibody.

[12] The molecule according to any one of Claims 9 to 11, which comprises an antibody that binds specifically to CD3 or an antigen-binding fragment thereof.

[13] The molecule according to Claim 12, wherein the antibody that binds specifically to CD3 or the antigen-binding fragment thereof comprises:

(CCH1) a heavy chain CDRH1 consisting of the amino acid sequence as shown in SEQ ID NO: 141;

(CCH2) a heavy chain CDRH2 consisting of the amino acid sequence as shown in SEQ ID NO: 142 or a heavy chain CDRH2 consisting of an amino acid sequence derived from the amino acid sequence as shown in SEQ ID NO: 142 in which amino acid 3 is N or S;

(CCH3) a heavy chain CDRH3 consisting of the amino acid sequence as shown in SEQ ID NO: 143;

(CCL1) a light chain CDRL1 consisting of the amino acid sequence as shown in SEQ ID NO: 144;

(CCL2) a light chain CDRL2 consisting of the amino acid sequence as shown in SEQ ID NO: 145 or a light chain CDRL2 consisting of an amino acid sequence derived from the amino acid sequence as shown in SEQ ID NO: 145 in which amino acid 2 is N; and

(CCL3) a light chain CDRL3 consisting of the amino acid sequence as shown in SEQ ID NO: 146.

[14] The molecule according to Claim 13, wherein the antibody that binds specifically to CD3 or the antigen-binding fragment thereof comprises:

(CH1) a heavy chain variable region consisting of an amino acid sequence of amino acids 2 to 119 of the amino acid sequence as shown in SEQ ID NO: 136,

(CH2) a heavy chain variable region consisting of an amino acid sequence of amino acids 2 to 119 of the amino acid sequence as shown in SEQ ID NO: 137,

(CH3) a heavy chain variable region consisting of an amino acid sequence of amino acids 2 to 119 of the amino acid sequence as shown in SEQ ID NO: 147,

(CH4) a heavy chain variable region consisting of an amino acid sequence of amino acids 2 to 119 of the amino acid sequence as shown in SEQ ID NO: 138,

(CH5) a heavy chain variable region consisting of an amino acid sequence of amino acids 2 to 119 of the amino acid sequence as shown in SEQ ID NO: 139,

(CH6) a heavy chain variable region consisting of an amino acid sequence of amino acids 2 to 119 of the amino acid sequence as shown in SEQ ID NO: 140,

(CH7) a heavy chain variable region consisting of an amino acid sequence of amino acids 272 to 389 of the amino acid sequence as shown in SEQ ID NO: 155,

(CH8) a heavy chain variable region consisting of an amino acid sequence of amino acids 277 to 394 of the amino acid sequence as shown in SEQ ID NO: 156; or

(CH9) a heavy chain variable region consisting of an amino acid sequence of amino acids 277 to 394 of the amino acid sequence as shown in SEQ ID NO: 157; and

(CL1) a light chain variable region consisting of an amino acid sequence of amino acids 135 to 243 of the amino acid sequence as shown in SEQ ID NO: 136,

(CL2) a light chain variable region consisting of an amino acid sequence of amino acids 135 to 241 of the amino acid sequence as shown in SEQ ID NO: 137,

(CL3) a light chain variable region consisting of an amino acid sequence of amino acids 135 to 243 of the amino acid sequence as shown in SEQ ID NO: 147,

(CL4) a light chain variable region consisting of an amino acid sequence of amino acids 135 to 241 of the amino acid sequence as shown in SEQ ID NO: 138,

(CL5) a light chain variable region consisting of an amino acid sequence of amino acids 135 to 243 of the amino acid sequence as shown in SEQ ID NO: 139,

(CL6) a light chain variable region consisting of an amino acid sequence of amino acids 135 to 243 of the amino acid sequence as shown in SEQ ID NO: 140,

(CL7) a light chain variable region consisting of an amino acid sequence of amino acids 405 to 511 of the amino acid sequence as shown in SEQ ID NO: 155,

(CL8) a light chain variable region consisting of an amino acid sequence of amino acids 410 to 516 of the amino acid sequence as shown in SEQ ID NO: 156, or

(CL9) a light chain variable region consisting of an amino acid sequence of amino acids 410 to 516 of the amino acid sequence as shown in SEQ ID NO: 157.

[15] The molecule according to Claim 14, wherein the antibody that binds specifically to CD3 or the antigen-binding fragment thereof comprises:

(CH1CL1) a heavy chain variable region consisting of an amino acid sequence of amino acids 2 to 119 of the amino acid sequence as shown in SEQ ID NO: 136 and a light chain variable region consisting of an amino acid sequence of amino acids 135 to 243 of the amino acid sequence as shown in SEQ ID NO: 136;

(CH2CL2) a heavy chain variable region consisting of an amino acid sequence of amino acids 2 to 119 of the amino acid sequence as shown in SEQ ID NO: 137 and a light chain variable region consisting of an amino acid sequence of amino acids 135 to 241 of the amino acid sequence as shown in SEQ ID NO: 137;

(CH3CL3) a heavy chain variable region consisting of an amino acid sequence of amino acids 2 to 119 of the amino acid sequence as shown in SEQ ID NO: 147 and a light chain variable region consisting of an amino acid sequence of amino acids 135 to 243 of the amino acid sequence as shown in SEQ ID NO: 147;

(CH4CL4) a heavy chain variable region consisting of an amino acid sequence of amino acids 2 to 119 of the amino acid sequence as shown in SEQ ID NO: 138 and a light chain variable region consisting of an amino acid sequence of amino acids 135 to 241 of the amino acid sequence as shown in SEQ ID NO: 138;

(CH5CL5) a heavy chain variable region consisting of an amino acid sequence of amino acids 2 to 119 of the amino acid sequence as shown in SEQ ID NO: 139 and a light chain variable region consisting of an amino acid sequence of amino acids 135 to 243 of the amino acid sequence as shown in SEQ ID NO: 139;

(CH6CL6) a heavy chain variable region consisting of an amino acid sequence of amino acids 2 to 119 of the amino acid sequence as shown in SEQ ID NO: 140 and a light chain variable region consisting of an amino acid sequence of amino acids 135 to 243 of the amino acid sequence as shown in SEQ ID NO: 140;

(CH7CL7) a heavy chain variable region consisting of an amino acid sequence of amino acids 272 to 389 of the amino acid sequence as shown in SEQ ID NO: 155 and a light

chain variable region consisting of an amino acid sequence of amino acids 405 to 511 of the amino acid sequence as shown in SEQ ID NO: 155;

(CH8CL8) a heavy chain variable region consisting of an amino acid sequence of amino acids 277 to 394 of the amino acid sequence as shown in SEQ ID NO: 156 and a light chain variable region consisting of an amino acid sequence of amino acids 410 to 516 of the amino acid sequence as shown in SEQ ID NO: 156; or

(CH9CL9) a heavy chain variable region consisting of an amino acid sequence of amino acids 277 to 394 of the amino acid sequence as shown in SEQ ID NO: 157 and a light chain variable region consisting of an amino acid sequence of amino acids 410 to 516 of the amino acid sequence as shown in SEQ ID NO: 157.

[16] The molecule according to any one of Claims 12 to 15, wherein the antibody that binds specifically to CD3 or the antigen-binding fragment thereof is scFv.

[17] The molecule according to Claim 16, wherein scFv comprises:

(CS1) scFv consisting of an amino acid sequence of amino acids 2 to 243 of the amino acid sequence as shown in SEQ ID NO: 136;

(CS2) scFv consisting of an amino acid sequence of amino acids 2 to 241 of the amino acid sequence as shown in SEQ ID NO: 137;

(CS3) scFv consisting of an amino acid sequence of amino acids 2 to 243 of the amino acid sequence as shown in SEQ ID NO: 147;

(CS4) scFv consisting of an amino acid sequence of amino acids 2 to 241 of the amino acid sequence as shown in SEQ ID NO: 138;

(CS5) scFv consisting of an amino acid sequence of amino acids 2 to 243 of the amino acid sequence as shown in SEQ ID NO: 139;

(CS6) scFv consisting of an amino acid sequence of amino acids 2 to 243 of the amino acid sequence as shown in SEQ ID NO: 140;

(CS7) scFv consisting of an amino acid sequence of amino acids 272 to 511 of the amino acid sequence as shown in SEQ ID NO: 155;

(CS8) scFv consisting of an amino acid sequence of amino acids 277 to 516 of the amino acid sequence as shown in SEQ ID NO: 156; or

(CS9) scFv consisting of an amino acid sequence of amino acids 277 to 516 of the

amino acid sequence as shown in SEQ ID NO: 157.

[18] The molecule according to any one of Claims 12 to 17 comprising: a first polypeptide comprising scFv that binds specifically to human HLA/NY-ESO, scFv that binds specifically to CD3, and an Fc region (i) in that order from the N terminus toward the C terminus; and a second polypeptide comprising an Fc region (ii), wherein the first polypeptide is associated with the second polypeptide at the Fc region (i) and the Fc region (ii).

[19] The molecule according to Claim 18, wherein the scFv that binds specifically to human HLA/NY-ESO is the antibody that binds specifically to human HLA/NY-ESO or the antigen-binding fragment thereof according to Claim 1, which is scFv.

[20] The molecule according to Claim 18, wherein the scFv that binds specifically to human HLA/NY-ESO is the antibody that binds specifically to human HLA/NY-ESO or the antigen-binding fragment thereof according to Claim 2, which is scFv.

[21] The molecule according to Claim 18, wherein the scFv that binds specifically to human HLA/NY-ESO is the antibody that binds specifically to human HLA/NY-ESO or the antigen-binding fragment thereof according to Claim 3, which is scFv.

[22] The molecule according to any one of Claims 18 to 21, wherein the scFv that binds specifically to CD3 is the antibody that binds specifically to CD3 or the antigen-binding fragment thereof according to Claim 13, which is scFv.

[23] The molecule according to any one of Claims 18 to 21, wherein the scFv that binds specifically to CD3 is the antibody that binds specifically to CD3 or the antigen-binding fragment thereof according to Claim 14, which is scFv.

[24] The molecule according to any one of Claims 18 to 21, wherein the scFv that binds specifically to CD3 is the antibody that binds specifically to CD3 or the antigen-binding fragment thereof according to Claim 15, which is scFv.

[25] The molecule according to any one of Claims 18 to 21, wherein the scFv that binds specifically to CD3 is the antibody that binds specifically to CD3 or the antigen-binding fragment thereof according to Claim 16 or 17, which is scFv.

[26] The molecule according to any one of claims 18 to 25 comprising an amino acid sequence of amino acids 21 to 511 of the amino acid sequence as shown in SEQ ID NO:96.

[27] The molecule according to any one of Claims 18 to 25, which comprises an amino acid

sequence selected from the group consisting of an amino acid sequence of amino acids 21 to 516 of the amino acid sequence as shown in SEQ ID NO: 156, and an amino acid sequence of amino acids 21 to 516 of the amino acid sequence as shown in SEQ ID NO: 157.

[28] The molecule according to any one of Claims 18 to 27, wherein the first polypeptide comprises an amino acid sequence of amino acids 529 to 745 of the amino acid sequence as shown in SEQ ID NO: 96.

[29] The molecule according to any one of Claims 18 to 27, wherein the first polypeptide comprises an amino acid sequence of amino acids 534 to 750 of the amino acid sequence as shown in SEQ ID NO: 156, or an amino acid sequence of amino acids 534 to 750 of the amino acid sequence as shown in SEQ ID NO: 157.

[30] The molecule according to Claim 26 or 28, wherein the first polypeptide consists of an amino acid sequence of an amino acid sequence of amino acids 20 to 745 of the amino acid sequence as shown in SEQ ID NO: 96.

[31] The molecule according to Claim 27 or 29, wherein the first polypeptide consists of an amino acid sequence of amino acids 20 to 750 of the amino acid sequence as shown in SEQ ID NO: 156, or an amino acid sequence of amino acids 20 to 750 of the amino acid sequence as shown in SEQ ID NO: 157.

[32] The molecule according to any one of Claims 18 to 31, wherein the second polypeptide comprises an amino acid sequence of amino acids 20 to 246 of the amino acid sequence as shown in SEQ ID NO: 84.

[33] The molecule according to any one of Claims 12 to 15 comprising a first polypeptide that comprises scFv that binds specifically to human HLA/NY-ESO, a heavy chain variable region and constant region CH1 of the antibody that binds specifically to CD3, and an immunoglobulin Fc region (i) in that order from the N terminus toward the C terminus, a second polypeptide that comprises a hinge region and an Fc region (ii) of the immunoglobulin, and a third polypeptide that comprises an antibody light chain consisting of a variable region and a constant region, wherein the first polypeptide is associated with the second polypeptide at the Fc region (i) and the Fc region (ii), and the first polypeptide is associated with the third polypeptide in the heavy chain variable region and the constant region CH1 of the antibody.

[34] The molecule according to Claim 33, wherein the third polypeptide comprises an

antibody light chain that binds specifically to the CD3, which consists of a variable region and constant region.

[35] The molecule according to Claim 33 or 34, wherein the scFv that binds specifically to human HLA/NY-ESO is the antibody that binds specifically to human HLA/NY-ESO or the antigen-binding fragment thereof according to Claim 1, which is scFv.

[36] The molecule according to Claim 33 or 34, wherein the scFv that binds specifically to human HLA/NY-ESO is the antibody that binds specifically to human HLA/NY-ESO or the antigen-binding fragment thereof according to Claim 2, which is scFv.

[37] The molecule according to Claim 33 or 34, wherein the scFv that binds specifically to human HLA/NY-ESO is the antibody that binds specifically to human HLA/NY-ESO or the antigen-binding fragment thereof according to Claim 3, which is scFv.

[38] The molecule according to any one of Claims 33 to 37, wherein the antibody that binds specifically to the CD3 or the antigen-binding fragment thereof is Fab.

[39] The molecule according to Claim 38, wherein the Fab that binds specifically to the CD3 is the antibody that binds specifically to CD3 or the antigen-binding fragment thereof according to Claim 13, which is Fab.

[40] The molecule according to Claim 38, wherein the Fab that binds specifically to the CD3 is the antibody that binds specifically to CD3 or the antigen-binding fragment thereof according to Claim 14, which is Fab.

[41] The molecule according to Claim 38, wherein the Fab that binds specifically to the CD3 is the antibody that binds specifically to CD3 or the antigen-binding fragment thereof according to Claim 15, which is Fab.

[42] The molecule according to any one of Claims 33 to 41, wherein the first polypeptide comprises an amino acid sequence of amino acids 21 to 394 of the amino acid sequence as shown in SEQ ID NO: 160.

[43] The molecule according to any one of Claims 33 to 42, wherein the first polypeptide comprises the amino acid sequence according to (i) or (ii) below:

(i) an amino acid sequence of amino acids 20 to 724 of the amino acid sequence as shown in SEQ ID NO: 160; and

(ii) an amino acid sequence of amino acids 20 to 719 of the amino acid sequence as

shown in SEQ ID NO: 197.

[44] The molecule according to any one of Claims 33 to 43, wherein the second polypeptide comprises an amino acid sequence of amino acids 20 to 246 of the amino acid sequence as shown in SEQ ID NO: 84.

[45] The molecule according to any one of Claims 33 to 44, wherein the third polypeptide comprises an amino acid sequence of amino acids 21 to 127 of the amino acid sequence as shown in SEQ ID NO: 161.

[46] The molecule according to any one of Claims 33 to 45, wherein the third polypeptide comprises an amino acid sequence of amino acids 21 to 233 of the amino acid sequence as shown in SEQ ID NO: 161.

[47] The molecule according to any one of Claims 9 to 46, wherein 1 or 2 amino acids are deleted from the carboxyl terminus of the amino acid sequence of at least one polypeptide included in the molecule, wherein the deleted amino acid(s) is glycine and/or lysine.

[48] A polynucleotide comprising a nucleotide sequence encoding an amino acid sequence included in the molecule according to any one of Claims 9 to 47.

[49] A vector comprising the polynucleotide according to Claim 48.

[50] A host cell comprising the polynucleotide according to Claim 48 or the vector according to Claim 49.

[51] A method for producing a molecule that binds specifically to human HLA/NY-ESO and human CD3 comprising: (i) a step of culturing the host cell according to Claim 50; and (ii) a step of purifying an antibody or an antigen-binding fragment thereof from the culture product obtained in the step (i).

[52] A pharmaceutical composition comprising, as an active ingredient, the molecule according to any one of Claims 9 to 47, the polynucleotide according to Claim 48, the vector according to Claim 49, or the host cell according to Claim 50.

[53] The pharmaceutical composition according to Claim 8 or 53, which is an anti-cancer agent.

[54] The pharmaceutical composition according to Claim 53, wherein cancer is one or more cancers selected from the group consisting of renal cancer, melanoma, squamous cell carcinoma, basal cell cancer, conjunctival cancer, oral cavity cancer, laryngeal cancer, pharyngeal cancer,

thyroid gland cancer, lung cancer (non-small cell lung cancer (adenocarcinoma, epidermoid cancer, large cell cancer), and small cell lung cancer), breast cancer, esophageal cancer, gastric cancer, duodenal carcinoma, small bowel cancer, large bowel cancer, rectal cancer, appendiceal cancer, anal cancer, liver cancer, gallbladder cancer, bile duct cancer, pancreatic cancer, adrenal cancer, bladder cancer, prostate cancer, uterine cancer, vaginal cancer, liposarcoma, angiosarcoma, chondrosarcoma, rhabdomyosarcoma, Ewing's sarcoma, osteosarcoma, undifferentiated pleomorphic sarcoma, myxofibrosarcoma, malignant peripheral nerve sheath tumor, retroperitoneal sarcoma, synovial sarcoma, uterine sarcoma, gastrointestinal stromal tumor, leiomyosarcoma, epithelioid sarcoma, B cell lymphoma, T/NK-cell lymphoma, Hodgkin's lymphoma, myelogenic leukemia, lymphatic leukemia, myeloproliferative disorder, myelodysplastic syndrome, multiple myeloma, testicular carcinoma, and ovarian cancer.

[55] Use of the antibody or the antigen-binding fragment thereof according to any one of Claims 1 to 3, the molecule according to any one of Claims 9 to 47, the polynucleotide according to Claim 4 or 48, the vector according to Claim 5 or 49, or the host cell according to Claim 6 or 50, in the manufacture of a pharmaceutical composition for treating cancer, wherein the pharmaceutical composition is to be used in combination with another agent.

[56] A multispecific molecule that binds specifically to human HLA/NY-ESO and human CD3 comprising a first polypeptide comprising scFv that binds specifically to human HLA/NY-ESO, scFv that binds specifically to CD3, and the Fc region (i) in that order from the N terminus toward the C terminus; and a second polypeptide comprising the Fc region (ii), wherein the first polypeptide is associated with the second polypeptide in the Fc region (i) and the Fc region (ii), and the first polypeptide comprises an amino acid sequence of amino acids 20 to 745 of the amino acid sequence as shown in SEQ ID NO: 96, an amino acid sequence of amino acids 20 to 745 of the amino acid sequence as shown in SEQ ID NO: 155, an amino acid sequence of amino acids 20 to 750 of the amino acid sequence as shown in SEQ ID NO: 156, or an amino acid sequence of amino acids 20 to 750 of the amino acid sequence as shown in SEQ ID NO: 157, or an amino acid sequence thereof wherein 1 or 2 amino acids are deleted from the carboxyl terminus of the amino acid sequence, and the second polypeptide comprises an amino acid sequence of amino acids 20 to 246 of the amino acid sequence as shown in SEQ ID NO:84 or an amino acid sequence thereof wherein 1

or 2 amino acids are deleted from the carboxyl terminus of the amino acid sequence, wherein the deleted amino acid(s) is glycine and/or lysine.

[57] A multispecific molecule that binds specifically to human HLA/NY-ESO and human CD3 comprising the first polypeptide that comprises scFv that binds specifically to human HLA/NY-ESO, heavy chain variable region and constant region CH1 of the antibody that binds specifically to CD3, and the immunoglobulin Fc region (i) in that order from the N terminus toward the C terminus, the second polypeptide that comprises the hinge region and the Fc region (ii) of the immunoglobulin, and the third polypeptide that comprises an antibody light chain consisting of a variable region and a constant region, wherein the first polypeptide is associated with the second polypeptide in the Fc region (i) and in the Fc region (ii), and the first polypeptide is associated with the third polypeptide in the heavy chain variable region and the constant region CH1 of the antibody, and

the first polypeptide comprises an amino acid sequence of amino acids 20 to 724 of the amino acid sequence as shown in SEQ ID NO: 160 or an amino acid sequence of amino acids 20 to 719 of the amino acid sequence as shown in SEQ ID NO: 197, or an amino acid sequence thereof wherein 1 or 2 amino acids are deleted from the carboxyl terminus of the amino acid sequence, and

the second polypeptide comprises an amino acid sequence of amino acids 20 to 246 of the amino acid sequence as shown in SEQ ID NO:84, and

the third polypeptide comprises an amino acid sequence of amino acids 21 to 127 of the amino acid sequence as shown in SEQ ID NO:161, or an amino acid sequence of amino acids 21 to 233 of the amino acid sequence as shown in SEQ ID NO:161,

wherein the deleted amino acid(s) is glycine and/or lysine.

[58] A polynucleotide comprising a nucleotide sequence encoding an amino acid sequence included in the molecule according to any one of Claims 56 or 57.

[59] A vector comprising the polynucleotide according to Claim 58.

[60] A host cell comprising the polynucleotide according to Claim 58 or the vector according to Claim 59.

[61] A method for producing a multispecific molecule that binds specifically to human HLA/NY-ESO and human CD3 comprising: (i) a step of culturing the host cell according to

Claim 60; and (ii) a step of purifying an antibody or an antigen-binding fragment thereof from the culture product obtained in the step (i).

[62] A pharmaceutical composition comprising, as an active ingredient, the molecule according to Claim 56 or 57, the polynucleotide according to Claim 58, the vector according to Claim 59, or the host cell according to Claim 60.

[63] The pharmaceutical composition according to Claim 62, which is an anti-cancer agent.

[64] The pharmaceutical composition according to Claim 63, wherein cancer is one or more cancers selected from the group consisting of renal cancer, melanoma, squamous cell carcinoma, basal cell cancer, conjunctival cancer, oral cavity cancer, laryngeal cancer, pharyngeal cancer, thyroid gland cancer, lung cancer (non-small cell lung cancer (adenocarcinoma, epidermoid cancer, large cell cancer), and small cell lung cancer), breast cancer, esophageal cancer, gastric cancer, duodenal carcinoma, small bowel cancer, large bowel cancer, rectal cancer, appendiceal cancer, anal cancer, liver cancer, gallbladder cancer, bile duct cancer, pancreatic cancer, adrenal cancer, bladder cancer, prostate cancer, uterine cancer, vaginal cancer, liposarcoma, angiosarcoma, chondrosarcoma, rhabdomyosarcoma, Ewing's sarcoma, osteosarcoma, undifferentiated pleomorphic sarcoma, myxofibrosarcoma, malignant peripheral nerve sheath tumor, retroperitoneal sarcoma, synovial sarcoma, uterine sarcoma, gastrointestinal stromal tumor, leiomyosarcoma, epithelioid sarcoma, B cell lymphoma, T/NK-cell lymphoma, Hodgkin's lymphoma, myelogenic leukemia, lymphatic leukemia, myeloproliferative disorder, myelodysplastic syndrome, multiple myeloma, testicular carcinoma, and ovarian cancer.

[65] Use of the molecule according to Claim 56 or 57, the polynucleotide according to Claim 58, the vector according to Claim 59, or the host cell according to Claim 60, in the manufacture of a pharmaceutical composition for treating cancer, wherein the pharmaceutical composition is to be used in combination with another agent.

[66] The pharmaceutical composition according to any one of claims 62 to 65, which comprises another agent.