What is claimed is:

1. A monoclonal or polyclonal antibody or an antigen binding fragment thereof comprising an antigen binding site that binds specifically to any one of the C1ORF32 polypeptides having the sequence of any one of SEQ ID NOs: 1, 7, 9-11, 13-15, 17, 103, and/or fragments, and/or epitopes thereof, adapted for treatment of cancer, wherein the cancer is selected from the group consisting of Thyroid Carcinoma, carcinoma of the esophagus, Invasive Ductal breast Carcinoma, breast comedocarcinoma, breast Medullary Carcinoma Grade 2, ovarian cancer selected from the group consisting of Serous and Mucinous, Granular cell tumor, Surface epithelial-stromal tumor (Adenocarcinoma), cystadenocarcinoma and Endometrioid tumor; kidney cancer selected from the group consisting of Clear cell carcinoma, Chromophobe adenoma, and sarcomatoides carcinoma; prostate adenocarcinoma having a Gleason score of 5 or higher, stage I to III prostate adenocarcinoma, Benign prostatic hyperplasia, stage II and III hepatocellular carcinoma, malignant hepatoma, fibrolamellar hepatocellular carcinoma, pseudoglandular (adenoid) hepatocellular carcinoma, pleomorphic (giant cell) hepatocellular carcinoma, clear cell HCC, Cholangiocarcinoma, pancreas cancer selected from Ductal and Mucinous Adenocarcinoma, Islet cell carcinoma, familial atypical multiple mole melanoma-pancreatic cancer syndrome (FAMMM-PC), Exocrine pancreas cancers, ductal adenocarcinoma, denosquamous carcinomas, signet ring cell carcinomas, hepatoid carcinomas, colloid carcinomas, undifferentiated carcinomas, and undifferentiated carcinomas with osteoclast-like giant cells, Low- to intermediate-grade neuroendocrine carcinomas and pancreatic carcinoid tumors, stage IV malignant melanoma, Lentigo maligna melanoma, Superficial spreading melanoma, Acral lentiginous melanoma, Mucosal melanoma, Nodular melanoma, Polypoid melanoma, Desmoplastic melanoma, Amelanotic melanoma, Soft-tissue melanoma, Osteogenic sarcoma, Chondrosarcoma, Leiomyosarcoma, Angiosarcoma, Askin's Tumor, Ewing's sarcoma, Kaposi's sarcoma, Liposarcoma, Malignant fibrous histiocytoma, Rhabdomyosarcoma, Neurofibrosarcoma, Hodgkin's lymphoma, B-cell Lymphoma, Mantle cell lymphoma (MCL), T-cell Lymphoma, Endometroid Adenocarcinoma, Bladder Transitional Cell carcinoma, Small Cell Lung Cancer, Non Small Cell Lung Cancer, Large-cell lung carcinoma, testicular seminoma, moderate to poorly differentiated Colo-rectal adenocarcinoma, and spinal cord tumor.

2. A monoclonal or polyclonal antibody or an antigen binding fragment thereof comprising an antigen binding site that binds specifically to any of SEQ ID NOS: 2, 3, 5, 6.

3. The antibody or antigen binding fragment according to claim 1, having the amino acid sequence that comprises:

at least one of a light chain variable region comprising a CDR1 region comprising the sequence selected from SEQ ID NO: 52, SEQ ID NO: 68, SEQ ID NO: 84, and SEQ ID NO: 100; a CDR2 region comprising the sequence selected from SEQ ID NO: 53, SEQ ID NO: 69, SEQ ID NO: 85 and SEQ ID NO: 101; or a CDR3 region comprising the sequence selected from SEQ ID NO: 54, SEQ ID NO: 70, SEQ ID NO: 86, and SEQ ID NO: 102, or a sequence having at least 95% homology thereto, or a sequence having at least 90% homology thereto; or

at least one of a heavy chain variable region comprising a CDR1 region comprising the sequence selected from SEQ ID NO: 62, SEQ ID NO: 46, SEQ ID NO: 78, and SEQ ID NO: 94; a CDR2 region comprising the sequence selected from SEQ ID NO: 63, SEQ ID NO: 47, SEQ ID NO: 79 and SEQ ID NO: 95; or a CDR3 region comprising the sequence selected from SEQ ID NO: 64, SEQ ID NO: 48, SEQ ID NO: 80, and SEQ ID NO: 96, or a sequence having at least 95% homology thereto, or a sequence having at least 90% homology thereto.

4. The monoclonal antibody according to claim 3, comprising:

at least one light chain variable region comprising a CDR1 region comprising the sequence selected from SEQ ID NO: 52, SEQ ID NO: 68, SEQ ID NO: 84, and SEQ ID NO: 100; a CDR2 region comprising the sequence selected from SEQ ID NO: 53, SEQ ID NO: 69, SEQ ID NO: 85 and SEQ ID NO: 101; and a CDR3 region comprising the sequence selected from SEQ ID NO: 54, SEQ ID NO: 70 SEQ ID NO: 86, and SEQ ID NO: 102, or a sequence having at least 95% homology thereto, or a sequence having at least 95% homology thereto; and

at least one heavy chain variable region comprising a CDR1 region comprising the sequence selected from SEQ ID NO: 62, SEQ ID NO: 46, SEQ ID NO: 78, and SEQ ID NO: 94; a CDR2 region comprising the sequence selected from SEQ ID NO: 63,

SEQ ID NO: 47, SEQ ID NO: 79 and SEQ ID NO: 95; and a CDR3 region comprising the sequence selected from SEQ ID NO: 64, SEQ ID NO: 48, SEQ ID NO: 80, and SEQ ID NO: 96, or a sequence having at least 95% homology thereto, or a sequence having at least 95% homology thereto.

5. The monoclonal antibody according to claim 4, comprising:

1) at least one light chain variable region comprising a CDR1 region comprising the sequence set forth in SEQ ID NO: 52; a CDR2 region comprising the sequence set forth in SEQ ID NO: 53; and a CDR3 region comprising the sequence set forth in SEQ ID NO: 54, or a sequence having at least 95% homology thereto, or a sequence having at least 90% homology thereto; and

2) at least one heavy chain variable region comprising a CDR1 region comprising the sequence set forth in SEQ ID NO: 62; a CDR2 region comprising the sequence set forth in SEQ ID NO: 63; and a CDR3 region comprising the sequence set forth in SEQ ID NO: 64, or a sequence having at least 95% homology thereto, or a sequence having at least 90% homology thereto, or

3) at least one light chain variable region comprising a CDR1 region comprising the sequence set forth in SEQ ID NO: 68; a CDR2 region comprising the sequence set forth in SEQ ID NO: 69; and a CDR3 region comprising the sequence set forth in SEQ ID NO: 70, or a sequence having at least 95% homology thereto, or a sequence having at least 90% homology thereto; and

4) at least one heavy chain variable region comprising a CDR1 region comprising the sequence set forth in SEQ ID NO: 46; a CDR2 region comprising the sequence set forth in SEQ ID NO: 47; and a CDR3 region comprising the sequence set forth in SEQ ID NO: 48, or a sequence having at least 95% homology thereto, or a sequence having at least 90% homology thereto, or

5) at least one light chain variable region comprising a CDR1 region comprising the sequence set forth in SEQ ID NO: 84; a CDR2 region comprising the sequence set forth in SEQ ID NO: 85; and a CDR3 region comprising the sequence set forth in SEQ ID NO: 86, or a sequence having at least 95% homology thereto, or a sequence having at least 90% homology thereto; and

6) at least one heavy chain variable region comprising a CDR1 region comprising the sequence set forth in SEQ ID NO: 78; a CDR2 region comprising the sequence set forth in SEQ ID NO: 79; and a CDR3 region comprising the sequence set forth in SEQ ID NO: 80, or a sequence having at least 95% homology thereto, or a sequence having at least 90% homology thereto, or

7) at least one light chain variable region comprising a CDR1 region comprising the sequence set forth in SEQ ID NO: 100; a CDR2 region comprising the sequence set forth in SEQ ID NO: 101; and a CDR3 region comprising the sequence set forth in SEQ ID NO: 102, or a sequence having at least 95% homology thereto, or a sequence having at least 90% homology thereto; and

8) at least one heavy chain variable region comprising a CDR1 region comprising the sequence set forth in SEQ ID NO: 94; a CDR2 region comprising the sequence set forth in SEQ ID NO: 95; and a CDR3 region comprising the sequence set forth in SEQ ID NO: 96, or a sequence having at least 95% homology thereto, or a sequence having at least 90% homology thereto.

6. The monoclonal antibody according to claim 3, having the amino acid sequence of the heavy chain selected from any one of SEQ ID NOs: 40, 56, 72, 88, and/or the amino acid sequence of the light chain selected from any one of SEQ ID NOs: 42, 58, 74, 90, or a sequence having at least 95% homology thereto, or a sequence having at least 90% homology thereto.

7. The monoclonal antibody according to claim 6, having at least one of the amino acid sequence of the heavy chain set forth in SEQ ID NO: 40, the amino acid sequence of the light chain set forth in SEQ ID NO: 42, or both.

8. The monoclonal antibody according to claim 6, having at least one of the amino acid sequence of the heavy chain set forth in SEQ ID NO: 56, the amino acid sequence of the light chain set forth in SEQ ID NO: 58, or both.

9. The monoclonal antibody according to claim 6, having at least one of the amino acid sequence of the heavy chain set forth in SEQ ID NO: 72, the amino acid sequence of the light chain set forth in SEQ ID NO: 74, or both.

10. The monoclonal antibody according to claim 6, having at least one of the amino acid sequence of the heavy chain set forth in SEQ ID NO: 88, the amino acid sequence of the light chain set forth in SEQ ID NO: 90, or both.

11. A polynucleotide having a nucleic acid sequence encoding the amino acid sequence of any of the above antibodies.

12. A monoclonal antibody having the amino acid sequence encoded by the nucleic acid sequence that comprises:

1) at least one light chain variable region comprising a CDR1 region encoded by a nucleic acid sequence selected from SEQ ID NO: 49, SEQ ID NO: 65, SEQ ID NO: 81, and SEQ ID NO: 97; a CDR2 region encoded by a nucleic acid sequence selected from SEQ ID NO: 50, SEQ ID NO: 66, SEQ ID NO: 82 and SEQ ID NO: 98; and a CDR3 region encoded by a nucleic acid sequence selected from SEQ ID NO: 51, SEQ ID NO: 67, SEQ ID NO: 83 and SEQ ID NO: 99, or a degenerative variant thereof; and

2) at least one heavy chain variable region comprising a CDR1 region encoded by a nucleic acid sequence selected from SEQ ID NO: 43, SEQ ID NO: 59, SEQ ID NO: 75, and SEQ ID NO: 91; a CDR2 region encoded by a nucleic acid sequence selected from SEQ ID NO: 44, SEQ ID NO: 60, SEQ ID NO: 76, and SEQ ID NO: 92; and a CDR3 region encoded by a nucleic acid sequence selected from SEQ ID NO: 45, SEQ ID NO: 61, SEQ ID NO: 77, and SEQ ID NO: 93, or a degenerative variant thereof.

13. A monoclonal antibody having the amino acid sequence encoded by the nucleic acid sequence that comprises:

1) at least one light chain variable region comprising a CDR1 region encoded by a nucleic acid sequence set forth in SEQ ID NO: 49; a CDR2 region encoded by a nucleic acid sequence set forth in SEQ ID NO: 50; and a CDR3 region encoded by a nucleic acid sequence set forth in SEQ ID NO: 51; and

2) at least one heavy chain variable region comprising a CDR1 region encoded by a nucleic acid sequence set forth in SEQ ID NO: 43; a CDR2 region encoded by a

nucleic acid sequence set forth in SEQ ID NO: 44; and a CDR3 region encoded by a nucleic acid sequence set forth in SEQ ID NO: 45, or

3) at least one light chain variable region comprising a CDR1 region encoded by a nucleic acid sequence set forth in SEQ ID NO: 65; a CDR2 region encoded by a nucleic acid sequence set forth in SEQ ID NO: 66; and a CDR3 region encoded by a nucleic acid sequence set forth in SEQ ID NO: 67; and

4) at least one heavy chain variable region comprising a CDR1 region encoded by a nucleic acid sequence set forth in SEQ ID NO: 59; a CDR2 region encoded by a nucleic acid sequence set forth in SEQ ID NO: 60; and a CDR3 region encoded by a nucleic acid sequence set forth in SEQ ID NO: 61, or

5) at least one light chain variable region comprising a CDR1 region encoded by a nucleic acid sequence set forth in SEQ ID NO: 81; a CDR2 region encoded by a nucleic acid sequence set forth in SEQ ID NO: 82; and a CDR3 region encoded by a nucleic acid sequence set forth in SEQ ID NO: 83; and

6) at least one heavy chain variable region comprising a CDR1 region encoded by a nucleic acid sequence set forth in SEQ ID NO: 75; a CDR2 region encoded by a nucleic acid sequence set forth in SEQ ID NO: 76; and a CDR3 region encoded by a nucleic acid sequence set forth in SEQ ID NO: 77, or

7) at least one light chain variable region comprising a CDR1 region encoded by a nucleic acid sequence set forth in SEQ ID NO: 97; a CDR2 region encoded by a nucleic acid sequence set forth in SEQ ID NO: 98; and a CDR3 region encoded by a nucleic acid sequence set forth in SEQ ID NO: 99; and

8) at least one heavy chain variable region comprising a CDR1 region encoded by a nucleic acid sequence set forth in SEQ ID NO: 91; a CDR2 region encoded by a nucleic acid sequence set forth in SEQ ID NO: 92; and a CDR3 region encoded by a nucleic acid sequence set forth in SEQ ID NO: 93.

14. The monoclonal antibody according to claim 13, having the amino acid sequence of the heavy chain encoded by a nucleic acid sequence selected from any one of SEQ ID NOs: 39, 55, 71, 87, and the amino acid sequence of the light chain encoded by a

nucleic acid sequence selected from any one of SEQ ID NOs: 41, 57, 73, 89, or a degenerative variant thereof.

15. The monoclonal antibody according to claim 13, having the amino acid sequence of the heavy chain encoded by a nucleic acid sequence set forth in SEQ ID NO: 39, and the amino acid sequence of the light chain encoded by a nucleic acid sequence set forth in SEQ ID NO: 41.

16. The monoclonal antibody according to claim 13, having the amino acid sequence of the heavy chain encoded by a nucleic acid sequence set forth in SEQ ID NO: 55, and the amino acid sequence of the light chain encoded by a nucleic acid sequence set forth in SEQ ID NO: 57.

17. The monoclonal antibody according to claim 13, having the amino acid sequence of the heavy chain encoded by a nucleic acid sequence set forth in SEQ ID NO: 71, and the amino acid sequence of the light chain encoded by a nucleic acid sequence set forth in SEQ ID NO: 73.

18. The monoclonal antibody according to claim 13, having the amino acid sequence of the heavy chain encoded by a nucleic acid sequence set forth in SEQ ID NO: 87, and the amino acid sequence of the light chain encoded by a nucleic acid sequence set forth in SEQ ID NO: 89.

19. The antibody according to any of the above claims, comprising an amino acid sequence selected from the group consisting of (a) sequences as listed herein; (b) sequences that differ from those sequences specified in (a) by 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 or more conservative amino acid substitutions except for the Serine residue in heavy chain CDR3 at position 100A (Kabat numbering system); (c) amino acid sequences having 85% or greater, 90% or greater, 95% or greater, 98% or greater, or 99% or greater sequence identity to the sequences specified in (a) or (b); (d) a polypeptide having an amino acid sequence encoded by a polynucleotide having a nucleic acid sequence encoding the amino acids as listed herein.

20. A vector comprising a polynucleotide having a sequence according to any of the above claims.

21. A hybridoma comprising the vector of claim 20.

22. An antibody secreted by the hybridoma of claim 21.

23. The antibody according to any of the above claims, secreted by 5166-2 and/or 5166-9 hybridoma deposited according to the provisions of the Budapest Treaty with the American Type Culture Collection (ATCC) Patent Depository 10801 University Boulevard, Manassas, Virginia 20110-2209 U.S.A., received by the ATCC Receiving Department on January 18 2013, having a Provisional Accession Number: 5166-2 PTA-13472 and/or 5166-9 PTA-13473, respectively.

24. A 5166-2 and/or 5166-9 hybridoma, deposited according to the provisions of the Budapest Treaty with the American Type Culture Collection (ATCC) Patent Depository 10801 University Boulevard, Manassas, Virginia 20110-2209 U.S.A., received by the ATCC Receiving Department on January 18 2013, having a Provisional Accession Number: 5166-2 PTA-13472 and/or 5166-9 PTA-13473, respectively.

25. An antibody produced by any of the hybridomas of claim 24.

26. The antibody or antigen binding fragment of the above claims, wherein the cancer expresses one or more C1ORF32 polypeptides on the cancer cells or in the immune cells infiltrating cancer cells congregated as a tumor.

27. The antibody or antigen binding fragment of claim 26, wherein said one or more C1ORF32 polypeptides comprises one or more of SEQ ID NOs: 1, 7, 9, 13, 17, 103, and/or their corresponding extracellular domains, selected from the group consisting of any one of SEQ ID NOs: 10, 14, 11, 15, and/or fragments, and/or epitopes thereof.

28. The antibody or antigen binding fragment according to any of the above claims, wherein the antibody is a fully human antibody, chimeric antibody, humanized or primatized antibody.

29. The antibody or the antigen binding fragment according to any of the above claims, wherein the antibody is selected from the group consisting of Fab, Fab', F(ab')2, F(ab'), F(ab), Fv or scFv fragment and minimal recognition unit.

30. The antibody or the antigen binding fragment according to any of the above claims, wherein the antibody is coupled to a moiety selected from a drug, a radionuclide, a

fluorophore, an enzyme, a toxin, a therapeutic agent, or a chemotherapeutic agent; and wherein the detectable marker is a radioisotope, a metal chelator, an enzyme, a fluorescent compound, a bioluminescent compound or a chemiluminescent compound.

31. A pharmaceutical composition comprising an antibody or an antigen binding fragment according to any of the above claims.

32. Use of the antibody, or antibody binding fragment, according to any of any of the above claims, or the pharmaceutical composition according to claim 31, for treatment of cancer, wherein the cancer exhibit the expression of C1ORF32 polypeptides comprised in SEQ ID NOs: 1, 7, 9, 13, 17, 103, and/or their corresponding extracellular domains, selected from the group consisting of any one of SEQ ID NOs: 10, 14, 11, 15, and/or fragments, and/or epitopes thereof, on the cancer cells or in the immune cells infiltrating the tumor, and wherein the cancer is selected from the group consisting of Thyroid Carcinoma, carcinoma of the esophagus, Invasive Ductal breast Carcinoma, breast comedocarcinoma, breast Medullary Carcinoma Grade 2, ovarian cancer selected from the group consisting of Serous and Mucinous, Granular cell tumor, Surface epithelial-stromal tumor (Adenocarcinoma), cystadenocarcinoma and Endometrioid tumor; kidney cancer selected from the group consisting of Clear cell carcinoma, Chromophobe adenoma, and sarcomatoides carcinoma; prostate adenocarcinoma having a Gleason score of 5 or higher, stage I to III prostate adenocarcinoma, Benign prostatic hyperplasia, stage II and III hepatocellular carcinoma, malignant hepatoma, fibrolamellar hepatocellular carcinoma, pseudoglandular (adenoid) hepatocellular carcinoma, pleomorphic (giant cell) hepatocellular carcinoma, clear cell HCC, Cholangiocarcinoma, pancreas cancer selected from Ductal and Mucinous Adenocarcinoma, Islet cell carcinoma, familial atypical multiple mole melanoma-pancreatic cancer syndrome (FAMMM-PC), Exocrine pancreas cancers, ductal adenocarcinoma, denosquamous carcinomas, signet ring cell carcinomas, hepatoid carcinomas, colloid carcinomas, undifferentiated carcinomas, and undifferentiated carcinomas with osteoclast-like giant cells, Low- to intermediate-grade neuroendocrine carcinomas and pancreatic carcinoid tumors, stage IV malignant melanoma, Lentigo maligna melanoma, Superficial spreading melanoma, Acral lentiginous melanoma, Mucosal melanoma, Nodular melanoma, Polypoid melanoma, Desmoplastic melanoma, Amelanotic

melanoma, Soft-tissue melanoma, Osteogenic sarcoma, Chondrosarcoma, Leiomyosarcoma, Angiosarcoma, Askin's Tumor, Ewing's sarcoma, Kaposi's sarcoma, Liposarcoma, Malignant fibrous histiocytoma, Rhabdomyosarcoma, Neurofibrosarcoma, Hodgkin's lymphoma, B-cell Lymphoma, Mantle cell lymphoma (MCL), T-cell Lymphoma, Endometroid Adenocarcinoma, Bladder Transitional Cell carcinoma, Small Cell Lung Cancer, Non Small Cell Lung Cancer, Large-cell lung carcinoma, testicular seminoma,, moderate to poorly differentiated Colo-rectal adenocarcinoma, and spinal cord tumor.

33. A method for treating cancer, wherein the cancer expresses C1ORF32 polypeptides comprising SEQ ID NOs: 1, 7, 9, 13, 17, 103, and/or their corresponding extracellular domains, selected from the group consisting of any one of SEQ ID NOs: 10, 14, 11, 15, and/or fragments, and/or epitopes thereof, on the cancer cells or in the immune cells infiltrating the tumor, and wherein the cancer is selected from the group consisting of Thyroid Carcinoma, carcinoma of the esophagus, Invasive Ductal breast Carcinoma, breast comedocarcinoma, breast Medullary Carcinoma Grade 2, ovarian cancer selected from the group consisting of Serous and Mucinous, Granular cell tumor, Surface epithelial-stromal tumor (Adenocarcinoma), cystadenocarcinoma and Endometrioid tumor; kidney cancer selected from the group consisting of Clear cell carcinoma, Chromophobe adenoma, and sarcomatoides carcinoma; prostate adenocarcinoma having a Gleason score of 5 or higher, stage I to III prostate adenocarcinoma, Benign prostatic hyperplasia, stage II and III hepatocellular carcinoma, malignant hepatoma, fibrolamellar hepatocellular carcinoma, pseudoglandular (adenoid) hepatocellular carcinoma, pleomorphic (giant cell) hepatocellular carcinoma, clear cell HCC, Cholangiocarcinoma, pancreas cancer selected from Ductal and Mucinous Adenocarcinoma, Islet cell carcinoma, familial atypical multiple mole melanoma-pancreatic cancer syndrome (FAMMM-PC), Exocrine pancreas cancers, ductal adenocarcinoma, denosquamous carcinomas, signet ring cell carcinomas, hepatoid carcinomas, colloid carcinomas, undifferentiated carcinomas, and undifferentiated carcinomas with osteoclast-like giant cells, Low- to intermediate-grade neuroendocrine carcinomas and pancreatic carcinoid tumors, stage IV malignant melanoma, Lentigo maligna melanoma, Superficial spreading melanoma, Acral lentiginous melanoma, Mucosal melanoma, Nodular melanoma, Polypoid melanoma, Desmoplastic melanoma, Amelanotic

melanoma, Soft-tissue melanoma, Osteogenic sarcoma, Chondrosarcoma, Leiomyosarcoma, Angiosarcoma, Askin's Tumor, Ewing's sarcoma, Kaposi's sarcoma, Liposarcoma, Malignant fibrous histiocytoma, Rhabdomyosarcoma, Neurofibrosarcoma, Hodgkin's lymphoma, B-cell Lymphoma, Mantle cell lymphoma (MCL), T-cell Lymphoma, Endometroid Adenocarcinoma, Bladder Transitional Cell carcinoma, Small Cell Lung Cancer, Non Small Cell Lung Cancer, Large-cell lung carcinoma, testicular seminoma, moderate to poorly differentiated Colo-rectal adenocarcinoma, and spinal cord tumor, comprising administering to a subject in need thereof an effective amount of any one of the antibody, or antibody binding fragment, according to any of any of the above claims, or the pharmaceutical composition according to claim 28.

34. The method of claim 33, wherein the treatment is combined with another moiety or therapy useful for treating cancer.

35. The method of claim 34, wherein the therapy is radiation therapy, antibody therapy, chemotherapy, photodynamic therapy, adoptive T cell therapy, Treg depletion, surgery or combination therapy with conventional drugs.

36. The method of claim 34, wherein the moiety is selected from the group consisting of immunosuppressants, cytotoxic drugs, tumor vaccines, antibodies, peptides, peptibodies, small molecules, chemotherapeutic agents, cytotoxic and cytostatic agents, immunological modifiers, interferons, interleukins, immunostimulatory growth hormones, cytokines, vitamins, minerals, aromatase inhibitors, RNAi, Histone Deacetylase Inhibitors, and proteasome inhibitors.

37. The method of claim 36, wherein the moiety is selected from the group consisting of bevacizumab, erbitux, paclitaxel, cisplatin, vinorelbine, docetaxel, gemcitabine, temozolomide, irinotecan, 5FU, carboplatin and folic acid.

38. Use of the antibody, or antibody binding fragment, according to any of the above claims, for diagnosis of cancer, wherein the cancer exhibit the expression of C1ORF32 polypeptides comprising SEQ ID NOs: 1, 7, 9, 13, 17, 103, and/or their corresponding extracellular domains, selected from the group consisting of any one of SEQ ID NOs: 10, 14, 11, 15, and/or fragments, and/or epitopes thereof, on the cancer cells or in the immune cells infiltrating the tumor, and wherein the cancer is

selected from the group consisting of Thyroid Carcinoma, carcinoma of the esophagus, Invasive Ductal breast Carcinoma, breast comedocarcinoma, breast Medullary Carcinoma Grade 2, ovarian cancer selected from the group consisting of Serous and Mucinous, Granular cell tumor, Surface epithelial-stromal tumor (Adenocarcinoma), cystadenocarcinoma and Endometrioid tumor; kidney cancer selected from the group consisting of Clear cell carcinoma, Chromophobe adenoma, and sarcomatoides carcinoma; prostate adenocarcinoma having a Gleason score of 5 or higher, stage I to III prostate adenocarcinoma, Benign prostatic hyperplasia, stage II and III hepatocellular carcinoma, malignant hepatoma, fibrolamellar hepatocellular carcinoma, pseudoglandular (adenoid) hepatocellular carcinoma, pleomorphic (giant cell) hepatocellular carcinoma, clear cell HCC, Cholangiocarcinoma, pancreas cancer selected from Ductal and Mucinous Adenocarcinoma, Islet cell carcinoma, familial atypical multiple mole melanoma-pancreatic cancer syndrome (FAMMM-PC), Exocrine pancreas cancers, ductal adenocarcinoma, denosquamous carcinomas, signet ring cell carcinomas, hepatoid carcinomas, colloid carcinomas, undifferentiated carcinomas, and undifferentiated carcinomas with osteoclast-like giant cells, Low- to intermediate-grade neuroendocrine carcinomas and pancreatic carcinoid tumors, stage IV malignant melanoma, Lentigo maligna melanoma, Superficial spreading melanoma, Acral lentiginous melanoma, Mucosal melanoma, Nodular melanoma, Polypoid melanoma, Desmoplastic melanoma, Amelanotic melanoma, Soft-tissue melanoma, Osteogenic sarcoma, Chondrosarcoma, Leiomyosarcoma, Angiosarcoma, Askin's Tumor, Ewing's sarcoma, Kaposi's sarcoma, Liposarcoma, Malignant fibrous histiocytoma, Rhabdomyosarcoma, Neurofibrosarcoma, Hodgkin's lymphoma, B-cell Lymphoma, Mantle cell lymphoma (MCL), T-cell Lymphoma, Endometroid Adenocarcinoma, Bladder Transitional Cell carcinoma, Small Cell Lung Cancer, Non Small Cell Lung Cancer, Large-cell lung carcinoma, testicular seminoma,, moderate to poorly differentiated Colo-rectal adenocarcinoma, and spinal cord tumor.

39. A method for diagnosing cancer in a subject, wherein the cancer is selected from the group consisting of Thyroid Carcinoma, carcinoma of the esophagus, Invasive Ductal breast Carcinoma, breast comedocarcinoma, breast Medullary Carcinoma Grade 2, ovarian cancer selected from the group consisting of Serous and Mucinous, Granular cell tumor, Surface epithelial-stromal tumor (Adenocarcinoma), cystadenocarcinoma

and Endometrioid tumor; kidney cancer selected from the group consisting of Clear cell carcinoma, Chromophobe adenoma, and sarcomatoides carcinoma; prostate adenocarcinoma having a Gleason score of 5 or higher, stage I to III prostate adenocarcinoma, Benign prostatic hyperplasia, stage II and III hepatocellular carcinoma, malignant hepatoma, fibrolamellar hepatocellular carcinoma, pseudoglandular (adenoid) hepatocellular carcinoma, pleomorphic (giant cell) hepatocellular carcinoma, clear cell HCC, Cholangiocarcinoma, pancreas cancer selected from Ductal and Mucinous Adenocarcinoma, Islet cell carcinoma, familial atypical multiple mole melanoma-pancreatic cancer syndrome (FAMMM-PC), Exocrine pancreas cancers, ductal adenocarcinoma, denosquamous carcinomas, signet ring cell carcinomas, hepatoid carcinomas, colloid carcinomas, undifferentiated carcinomas, and undifferentiated carcinomas with osteoclast-like giant cells, Low- to intermediate-grade neuroendocrine carcinomas and pancreatic carcinoid tumors, stage IV malignant melanoma, Lentigo maligna melanoma, Superficial spreading melanoma, Acral lentiginous melanoma, Mucosal melanoma, Nodular melanoma, Polypoid melanoma, Desmoplastic melanoma, Amelanotic melanoma, Soft-tissue melanoma, Osteogenic sarcoma, Chondrosarcoma, Leiomyosarcoma, Angiosarcoma, Askin's Tumor, Ewing's sarcoma, Kaposi's sarcoma, Liposarcoma, Malignant fibrous histiocytoma, Rhabdomyosarcoma, Neurofibrosarcoma, Hodgkin's lymphoma, B-cell Lymphoma, Mantle cell lymphoma (MCL), T-cell Lymphoma, Endometroid Adenocarcinoma, Bladder Transitional Cell carcinoma, Small Cell Lung Cancer, Non Small Cell Lung Cancer, Large-cell lung carcinoma, testicular seminoma, moderate to poorly differentiated Colo-rectal adenocarcinoma, and spinal cord tumor, comprising detecting in the subject or in a sample obtained from said subject any one of the C1ORF32 polypeptides comprised in SEQ ID NOs: 1, 7, 9, 13, 17, 103, and/or their corresponding extracellular domains, selected from the group consisting of any one of SEQ ID NOs: 10, 14, 11, 15, and/or fragments, and/or epitopes thereof.

40. The method according to claim 39, wherein detecting the polypeptide is performed in vivo or in vitro.

41. The method according to claim 40, wherein the detection is conducted by immunoassay.

42. The method according to claim 40, wherein the detection is conducted using antibodies or fragments according to any of the above claims.

43. The antibody, method, composition or use of any of the above claims, wherein said Thyroid Carcinoma is selected from one or more of Thyroid Papillary Carcinoma, Thyroid Follicular Carcinoma (preferably stage II and III), incidental papillary carcinoma (IPC), Medullary thyroid cancer, Anaplastic thyroid cancer.

44. The antibody, method, composition or use of any of the above claims, wherein said carcinoma of the esophagus is a squamous cell carcinoma of the esophagus.

45. The antibody, method, composition or use of any of the above claims, wherein said Invasive Ductal Carcinoma is selected from stage II to IV and/or poorly differentiated Invasive Ductal Carcinoma, and/or wherein said Medullary Carcinoma is Grade 2 Medullary Carcinoma.

46. The antibody, method, composition or use of any of the above claims, wherein said Serous and Mucinous ovarian carcinoma is selected from stages Ic to IIIb Serous and Mucinous ovarian carcinoma.

47. The antibody, method, composition or use of any of the above claims, wherein said kidney Clear cell carcinoma is selected from stage I to II renal Clear cell carcinoma.

48. The antibody, method, composition or use of any of the above claims, wherein said hepatocellular carcinoma is selected from stage II and III hepatocellular carcinoma.

49. The antibody, method, composition or use of any of the above claims, wherein said Hodgkin's lymphoma is selected from Nodular sclerosing, Mixed-cellularity subtype, Lymphocyte-rich or Lymphocytic predominance, Lymphocyte depleted and Unspecified.

50. The antibody, method, composition or use of any of the above claims, wherein said B-cell Lymphoma is selected from the group consisting of Diffuse large B cell lymphoma, Follicular lymphoma, Mucosa-Associated Lymphatic Tissue lymphoma (MALT), Small cell lymphocytic lymphoma, Burkitt lymphoma, Mediastinal large B cell lymphoma, Waldenström macroglobulinemia, Nodal marginal zone B cell lymphoma (NMZL), Splenic marginal zone lymphoma (SMZL), Intravascular large B-cell lymphoma, Primary effusion lymphoma, Lymphomatoid granulomatosis.

51. The antibody, method, composition or use of any of the above claims, wherein said T-cell Lymphoma is selected from the group consisting of Extranodal T cell lymphoma, Cutaneous T cell lymphomas: Sézary syndrome and Mycosis fungoides, Anaplastic large cell lymphoma, and Angioimmunoblastic T cell lymphoma.

52. The antibody, method, composition or use of any of the above claims, wherein said Endometroid Adenocarcinoma is selected from stage I to IIIc Endometroid Adenocarcinoma.

53. The antibody, method, composition or use of any of the above claims, wherein said bladder Transitional Cell carcinoma is selected from stage II to IV Transitional Cell carcinoma.

54. The antibody, method, composition or use of any of the above claims, wherein said Small Cell Lung Cancer is selected from stage I to IIIb Small Cell Lung Cancer, and/or wherein said Non Small Cell Lung Cancer is selected from poorly to moderately differentiated squamous and adeno carcinoma.

55. The antibody, method, composition or use of any of the above claims, wherein said antibody or fragment inhibits activities elicited by C1ORF32.

56. The antibody, method, composition or use of claim 55, wherein said antibody or fragment modulates B7 related costimulation, increases T cell activation, alleviates T-cell suppression, increases cytokine secretion, increases IL-2 secretion; increases interferon-gamma production by T-cells, increases Th1 response, decreases Th2 response, promotes cancer epitope spreading, reduces inhibition of T cell activation, increases T cell response in a mammal, stimulates antigen-specific memory responses, elicits apoptosis or lysis of cancer cells, stimulates cytotoxic or cytostatic effect on cancer cells, induces direct killing of cancer cells, induces complement dependent cytotoxicity and/or antibody dependent cell-mediated cytotoxicity, and/or has CDC activity.

57. The antibody, method, composition or use of claim 56, wherein said antibody or fragment increases immune response against the cancer.

58. The antibody, method, composition or use of claim 56, wherein said antibody or fragment reduces activity of regulatory T lymphocytes (T-regs).

59. The antibody, method, composition or use of claim 56, wherein said antibody or fragment inhibits iTreg differentiation,

60. The antibody, method, composition or use of any of the above claims, administered to a subject simultaneously or sequentially in combination with one or more potentiating agents to obtain a therapeutic effect, wherein said one or more potentiating agents is selected from the group consisting of radiotherapy, conventional/classical chemotherapy potentiating anti-tumor immune responses, Targeted therapy potentiating anti-tumor immune responses, Therapeutic agents targeting Tregs and/or MDSCs, Immunostimulatory antibodies, Therapeutic cancer vaccines, Adoptive cell transfer.

61. The antibody, method, composition or use of any of claim 60, wherein the conventional/classical chemotherapy agent is selected from Gemcitabine, Oxaliplatin, cisplatin, carboplatin, platinum based compounds, Cyclophosphamide, Anthracyclines, doxorubicin, daunorubicin, Taxanes, paclitaxel, docetaxel, microtubule inhibitors, vincristine, Folate antagonists, methotrexate, mTOR pathway inhibitors, temsirolimus and rapamycin, oxaliplatin, cyclophosphamide, doxorubicin, and mitoxantrone.

62. The antibody, method, composition or use of claim 60, wherein the Targeted therapy agent is selected from histone deacetylase (HDAC) inhibitors, vorinostat, sodium butyrate and MS-275, Bortezomib, Vemurafenib, JAK2 inhibitors, tyrosine kinase inhibitors (TKIs) and therapeutic monoclonal antibodies.

63. The antibody, method, composition or use of claim 62, wherein the Targeted therapy agent is selected from erlotinib, imatinib, sunitinib, sorafenib, anti-EGFR mAbs cetuximab, anatimumab and trastuzumab.

64. The antibody, method, composition or use of claim 60, wherein the Therapeutic agent targeting immunosuppressive cells Tregs and/or MDSCs is selected from antimitotic drugs, cyclophosphamide, gemcitabine, mitoxantrone, fludarabine, thalidomide, thalidomide derivatives, COX-2 inhibitors, depleting or killing antibodies that directly target Tregs through recognition of Treg cell surface receptors, anti-CD25 daclizumab, basiliximab, ligand-directed toxins, denileukin diftitox (Ontak) - a fusion protein of human IL-2 and diphtheria toxin, or LMB-2 – a fusion between an scFv against CD25 and the pseudomonas exotoxin, antibodies targeting Treg cell surface receptors, TLR modulators, agents that interfere with the adenosinergic pathway, ectonucleotidase inhibitors, or inhibitors of the A2A adenosine receptor,

TGF-β inhibitors, chemokine receptor inhibitors, retinoic acid, all-trans retinoic acid (ATRA), Vitamin D3, phosphodiesterase 5 inhibitors, sildenafil, ROS inhibitors and nitroaspirin.

65. The antibody, method, composition or use of claim 60, wherein the Immunostimulatory antibody is selected from antagonistic antibodies targeting one or more of CTLA4, ipilimumab, PD-1, BMS-936558, MDX-1106, PDL-1, BMS-936559/MDX-1105, LAG-3, IMP-321, TIM-3 or BTLA and/or Agonistic antibodies targeting one or more of CD40, CP-870,893, CD137, BMS-663513, OX40, Anti-OX40, GITR or TRX518.

66. The antibody, method, composition or use of claim 60, wherein the Therapeutic cancer vaccine is selected from exogenous cancer vaccines including proteins or peptides used to mount an immunogenic response to a tumor antigen, recombinant virus and bacteria vectors encoding tumor antigens, DNA-based vaccines encoding tumor antigens, proteins targeted to dendritic cells, dendritic cells, gene modified tumor cells expressing GM-CSF and/or Flt3-ligand.

67. The antibody, method, composition or use of claim 60, wherein the Therapeutic cancer vaccine comprises Dendritic-cell-based vaccines.

What is claimed is:

1. A monoclonal or polyclonal antibody or an antigen binding fragment thereof comprising an antigen binding site that binds specifically to any one of the C1ORF32 polypeptides having the sequence of any one of SEQ ID NOs: 14, 1, 7, 9-11, 13, 15, 17, 103, and/or fragments, and/or epitopes thereof, for use in the treatment of cancer, wherein said antibody or fragment increases interferon-gamma production by T-cells, and wherein the cancer expresses one or more C1ORF32 polypeptides on the cancer cells or in the immune cells infiltrating cancer cells congregated as a tumor.

2. The antibody or antigen binding fragment of claim 1, comprising an antigen binding site that binds specifically to any of SEQ ID NOS: 2, 3, 5, 6.

3. The antibody or antigen binding fragment of the above claims, wherein the antibody or fragment increases immune response against the cancer.

4. The antibody or antigen binding fragment according to any of the above claims, wherein the antibody is a fully human antibody, chimeric antibody, humanized or primatized antibody.

5. The antibody or the antigen binding fragment according to any of the above claims, wherein the antibody is selected from the group consisting of Fab, Fab', F(ab')2, F(ab'), F(ab), Fv or scFv fragment and minimal recognition unit.

6. The antibody or the antigen binding fragment according to any of the above claims, wherein the antibody is coupled to a moiety selected from a drug, a radionuclide, a fluorophore, an enzyme, a toxin, a therapeutic agent, or a chemotherapeutic agent; and wherein the detectable marker is a radioisotope, a metal chelator, an enzyme, a fluorescent compound, a bioluminescent compound or a chemiluminescent compound.

7. A pharmaceutical composition comprising an antibody or an antigen binding fragment according to any of the above claims.

8. The antibody, antigen binding fragment or pharmaceutical composition of any of the above claims, wherein said treatment comprises an additional therapy, wherein the additional therapy is radiation therapy, antibody therapy, chemotherapy, photodynamic therapy, adoptive T cell therapy, Treg depletion, surgery or combination therapy with conventional drugs.

9. The antibody, antigen binding fragment or pharmaceutical composition of any of the above claims, wherein said treatment is combined with an additional moiety, wherein the moiety is selected from the group consisting of immunosuppressants, cytotoxic drugs, tumor vaccines, antibodies, peptides, pepti-bodies, small molecules, chemotherapeutic agents, cytotoxic and cytostatic agents, immunological modifiers, interferons, interleukins, immunostimulatory growth hormones, cytokines, vitamins, minerals, aromatase inhibitors, RNAi, Histone Deacetylase Inhibitors, and proteasome inhibitors.

10. The antibody, antigen binding fragment or pharmaceutical composition of claim 9, wherein the moiety is selected from the group consisting of bevacizumab, erbitux, paclitaxel, cisplatin, vinorelbine, docetaxel, gemcitabine, temozolomide, irinotecan, 5FU, carboplatin and folic acid.

11. The antibody, antigen binding fragment or composition of any of the above claims, wherein said antibody or fragment inhibits activities elicited by C1ORF32, wherein said antibody or fragment modulates B7 related costimulation, increases T cell activation, alleviates T-cell suppression, increases cytokine secretion, increases IL-2 secretion; increases Th1 response, decreases Th2 response, promotes cancer epitope spreading, reduces inhibition of T cell activation, increases T cell response in a mammal, stimulates antigen-specific memory responses, elicits apoptosis or lysis of cancer cells, stimulates cytotoxic or cytostatic effect on cancer cells, induces direct killing of cancer cells, induces complement dependent cytotoxicity and/or antibody dependent cell-mediated cytotoxicity, and/or has CDC activity.

12. The antibody, antigen binding fragment or composition of any of the above claims, wherein said antibody or fragment increases immune response against the cancer.

13. The antibody, antigen binding fragment or composition of any of the above claims, wherein said antibody or fragment reduces activity of regulatory T lymphocytes (T-regs).

14. The antibody, antigen binding fragment or composition of any of the above claims, wherein said antibody or fragment inhibits iTreg differentiation.

15. The antibody, antigen binding fragment or composition of any of the above claims, administered to a subject simultaneously or sequentially in combination with one or

more potentiating agents to obtain a therapeutic effect, wherein said one or more potentiating agents is selected from the group consisting of radiotherapy, conventional/classical chemotherapy potentiating anti-tumor immune responses, Targeted therapy potentiating anti-tumor immune responses, Therapeutic agents targeting Tregs and/or MDSCs, Immunostimulatory antibodies, Therapeutic cancer vaccines, Adoptive cell transfer.

16. The antibody, antigen binding fragment or composition of claim 15, wherein the conventional/classical chemotherapy agent is selected from Gemcitabine, Oxaliplatin, cisplatin, carboplatin, platinum based compounds, Cyclophosphamide, Anthracyclines, doxorubicin, daunorubicin, Taxanes, paclitaxel, docetaxel, microtubule inhibitors, vincristine, Folate antagonists, methotrexate, mTOR pathway inhibitors, temsirolimus and rapamycin, and mitoxantrone.

17. The antibody, antigen binding fragment or composition of claim 15 or 16, wherein the Targeted therapy agent is selected from histone deacetylase (HDAC) inhibitors, vorinostat, sodium butyrate and MS-275, Bortezomib, Vemurafenib, JAK2 inhibitors, tyrosine kinase inhibitors (TKIs) and therapeutic monoclonal antibodies.

18. The antibody, antigen binding fragment or composition of claims 15 to 17, wherein the Targeted therapy agent is selected from erlotinib, imatinib, sunitinib, sorafenib, anti-EGFR mAbs cetuximab, anatimumab and trastuzumab.

19. The antibody, antigen binding fragment or composition of claims 15 to 18, wherein the Therapeutic agent targeting immunosuppressive cells Tregs and/or MDSCs is selected from antimitotic drugs, cyclophosphamide, gemcitabine, mitoxantrone, fludarabine, thalidomide, thalidomide derivatives, COX-2 inhibitors, depleting or killing antibodies that directly target Tregs through recognition of Treg cell surface receptors, anti-CD25 daclizumab, basiliximab, ligand-directed toxins, denileukin diftitox (Ontak) - a fusion protein of human IL-2 and diphtheria toxin, or LMB-2 – a fusion between an scFv against CD25 and the pseudomonas exotoxin, antibodies targeting Treg cell surface receptors, TLR modulators, agents that interfere with the adenosinergic pathway, ectonucleotidase inhibitors, or inhibitors of the A2A adenosine receptor, TGF-β inhibitors, chemokine receptor inhibitors, retinoic acid, all-trans retinoic acid (ATRA), Vitamin D3, phosphodiesterase 5 inhibitors, sildenafil, ROS inhibitors and nitroaspirin.

20. The antibody, antigen binding fragment or composition of claims 15 to 19, wherein the immunostimulatory antibody is selected from antagonistic antibodies targeting one or more of CTLA4, PD-1, PDL-1, LAG-3, TIM-3 or BTLA and/or Agonistic antibodies targeting one or more of CD40, CD137, OX40, andGITR.

21. The antibody, antigen binding fragment or composition of claim 20, wherein the antagonistic antibody is selected from ipilimumab, BMS-936558, MDX-1106, BMS-936559, MDX-1105 and IMP-321, and/or the agonistic antibodies are selected from CP-870,893, BMS-663513, Anti-OX40 and TRX518.

22. The antibody, antigen binding fragment or composition of claims 15 to 21, wherein the therapeutic cancer vaccine is selected from exogenous cancer vaccines including proteins or peptides used to mount an immunogenic response to a tumor antigen, recombinant virus and bacteria vectors encoding tumor antigens, DNA-based vaccines encoding tumor antigens, proteins targeted to dendritic cells, dendritic cells, gene modified tumor cells expressing GM-CSF and/or Flt3-ligand.

23. The antibody, antigen binding fragment or composition of claims 15 to 21, wherein the Therapeutic cancer vaccine comprises Dendritic-cell-based vaccines.

24. A method for diagnosing cancer, comprising detecting in a sample obtained from a subject any one of the C1ORF32 polypeptides comprised in SEQ ID NOs: 1, 7, 9, 13, 17, 103, and/or their corresponding extracellular domains, selected from the group consisting of any one of SEQ ID NOs: 10, 14, 11, 15, and/or fragments, and/or epitopes thereof, and wherein the cancer is selected from the group consisting of Thyroid Carcinoma, carcinoma of the esophagus, Invasive Ductal breast Carcinoma, breast comedocarcinoma, breast Medullary Carcinoma Grade 2, ovarian cancer selected from the group consisting of Serous and Mucinous, Granular cell tumor, Surface epithelial-stromal tumor (Adenocarcinoma), cystadenocarcinoma and Endometrioid tumor; kidney cancer selected from the group consisting of Clear cell carcinoma, Chromophobe adenoma, and sarcomatoides carcinoma; prostate adenocarcinoma having a Gleason score of 5 or higher, stage I to III prostate adenocarcinoma, Benign prostatic hyperplasia, stage II and III hepatocellular carcinoma, malignant hepatoma, fibrolamellar hepatocellular carcinoma, pseudoglandular (adenoid) hepatocellular carcinoma, pleomorphic (giant cell) hepatocellular carcinoma, clear cell HCC, Cholangiocarcinoma, pancreas cancer

selected from Ductal and Mucinous Adenocarcinoma, Islet cell carcinoma, familial atypical multiple mole melanoma-pancreatic cancer syndrome (FAMMM-PC), Exocrine pancreas cancers, ductal adenocarcinoma, denosquamous carcinomas, signet ring cell carcinomas, hepatoid carcinomas, colloid carcinomas, undifferentiated carcinomas, and undifferentiated carcinomas with osteoclast-like giant cells, Low- to intermediate-grade neuroendocrine carcinomas and pancreatic carcinoid tumors, stage IV malignant melanoma, Lentigo maligna melanoma, Superficial spreading melanoma, Acral lentiginous melanoma, Mucosal melanoma, Nodular melanoma, Polypoid melanoma, Desmoplastic melanoma, Amelanotic melanoma, Soft-tissue melanoma, Osteogenic sarcoma, Chondrosarcoma, Leiomyosarcoma, Angiosarcoma, Askin's Tumor, Ewing's sarcoma, Kaposi's sarcoma, Liposarcoma, Malignant fibrous histiocytoma, Rhabdomyosarcoma, Neurofibrosarcoma, Hodgkin's lymphoma, B-cell Lymphoma, Mantle cell lymphoma (MCL), T-cell Lymphoma, Endometroid Adenocarcinoma, Bladder Transitional Cell carcinoma, Small Cell Lung Cancer, Non Small Cell Lung Cancer, Large-cell lung carcinoma, testicular seminoma, moderate to poorly differentiated Colo-rectal adenocarcinoma, and spinal cord tumor; wherein the detection is conducted by immunoassay, wherein the detection is conducted using the antibody or antigen binding fragment according to at least one of the preceding claims.

25. The antibody, antigen binding fragment, method or composition of any of the above claims, wherein said Thyroid Carcinoma is selected from one or more of Thyroid Papillary Carcinoma, Thyroid Follicular Carcinoma (preferably stage II and III), incidental papillary carcinoma (IPC), Medullary thyroid cancer, Anaplastic thyroid cancer; or wherein said carcinoma of the esophagus is a squamous cell carcinoma of the esophagus; or wherein said Invasive Ductal Carcinoma is selected from stage II to IV and/or poorly differentiated Invasive Ductal Carcinoma, and/or wherein said Medullary Carcinoma is Grade 2 Medullary Carcinoma; or wherein said Serous and Mucinous ovarian carcinoma is selected from stages Ic to IIIb Serous and Mucinous ovarian carcinoma; or wherein said kidney Clear cell carcinoma is selected from stage I to II renal Clear cell carcinoma; or wherein said hepatocellular carcinoma is selected from stage II and III hepatocellular carcinoma; or wherein said Hodgkin's lymphoma is selected from Nodular sclerosing, Mixed-cellularity subtype, Lymphocyte-rich or Lymphocytic predominance, Lymphocyte depleted and Unspecified; or wherein said B-cell Lymphoma is selected from the group consisting of Diffuse large B cell

lymphoma, Follicular lymphoma, Mucosa-Associated Lymphatic Tissue lymphoma (MALT), Small cell lymphocytic lymphoma, Burkitt lymphoma, Mediastinal large B cell lymphoma, Waldenström macroglobulinemia, Nodal marginal zone B cell lymphoma (NMZL), Splenic marginal zone lymphoma (SMZL), Intravascular large B-cell lymphoma, Primary effusion lymphoma, Lymphomatoid granulomatosis; or wherein said T-cell Lymphoma is selected from the group consisting of Extranodal T cell lymphoma, Cutaneous T cell lymphomas: Sézary syndrome and Mycosis fungoides, Anaplastic large cell lymphoma, and Angioimmunoblastic T cell lymphoma; or wherein said Endometroid Adenocarcinoma is selected from stage I to IIIc Endometroid Adenocarcinoma; or wherein said bladder Transitional Cell carcinoma is selected from stage II to IV Transitional Cell carcinoma; or wherein said Small Cell Lung Cancer is selected from stage I to IIIb Small Cell Lung Cancer, and/or wherein said Non Small Cell Lung Cancer is selected from poorly to moderately differentiated squamous and adeno carcinoma.