CLAIMS:

1. A method for the treatment or prophylaxis of non-Hodgkin's lymphoma wherein LY75 is expressed in said lymphoma, which comprises administering to a subject in need thereof a therapeutically-effective amount of an affinity reagent which binds to LY75.

2. A method for the treatment or prophylaxis of a cancer selected from the group consisting of lymphoma, myeloma, leukaemia, thyroid cancer, bladder cancer, breast cancer, gastric cancer, esophagus cancer, head and neck cancer and skin cancer wherein LY75 is expressed in said cancer, which comprises administering to a subject in need thereof a therapeutically effective amount of an affinity reagent which binds to LY75.

3. The method according to claim 1 or claim 2, wherein the affinity reagent binds specifically to LY75.

4. The method according to any one of claims 1 to 3, wherein the affinity reagent is an antibody or a functional fragment thereof or antigen-binding portion thereof, or an antibody mimetic.

5. The method according to claim 4, wherein the affinity reagent is a monoclonal antibody.

6. The method according to claim 4 or 5, wherein the affinity reagent is a chimeric antibody, a human antibody, a humanized antibody, a single chain antibody, a defucosylated antibody or a bispecific antibody.

7. The method according to claim 4, wherein the functional antibody fragment is a UniBody, a domain antibody or a Nanobody.

8. The method according to claim 4, wherein the antibody mimetic is an Affibody, a DARPin, an Anticalin, an Avimer, a Versabody or a Duocalin.

9. The method according to any one of claims 1 to 8, wherein the affinity reagent contains or is conjugated to a therapeutic moiety.

10. The method according to claim 9, wherein the therapeutic moiety is a cytotoxic moiety or a radioactive isotope.

11. The method according to claim 9 or 10, wherein the affinity reagent is an antibody drug conjugate.

12. The method according to any one of claims 1 to 8 wherein the affinity reagent elicits antibody-dependent cellular cytotoxicity (ADCC).

13. The method according to any one of claims 1 to 8 wherein the affinity reagent elicits complement dependent cytotoxicity (CDC).

14. The method according to any one of claims 1 to 8 wherein the affinity reagent elicits T-cell cytotoxicity.

15. The method according to any one of claims 1 to 8 wherein the affinity reagent induces apoptosis of cancer cells, kills or reduces the number of cancer stem cells and/or kills or reduces the number of circulating cancer cells.

16. The method according to any one of claims 1 to 8 wherein the affinity reagent modulates a physiological function of LY75, inhibits ligand binding to LY75 and/or inhibits a signal transduction pathway mediated by LY75.

17. A method of detecting, diagnosing and/or screening for or monitoring the progression of a cancer selected from the group consisting of lymphoma, myeloma, leukaemia, thyroid cancer, bladder cancer, breast cancer, gastric cancer, esophagus cancer, head and neck cancer and skin cancer wherein LY75 is expressed in said cancer, or of monitoring the effect of a cancer drug or therapy directed to said cancer, in a subject which comprises detecting the presence or level of LY75, or one or more fragments thereof, or the presence or level of nucleic acid encoding LY75, or which comprises detecting a change in the level of either thereof in said subject.

18. The method according to claim 17 which comprises detecting the presence of LY75, or one or more fragments thereof, or the presence of nucleic acid encoding LY75, in which either (a) the presence of an elevated level of LY75, or said one or more fragments thereof, or an elevated level of nucleic acid encoding LY75 in the subject as compared with the level in a healthy subject, or (b) the presence of a detectable level of LY75, or said one or more fragments thereof, or a detectable level of nucleic acid encoding LY75 in the subject as compared with a corresponding undetectable level in a healthy subject is indicative of the presence of said cancer in said subject.

19. A method of detecting, diagnosing and/or screening for or monitoring the progression a cancer selected from the group consisting of lymphoma, myeloma, leukaemia, thyroid cancer, bladder cancer, breast cancer, gastric cancer, esophagus cancer, head and neck cancer and skin cancer wherein LY75 is expressed in said cancer, or of monitoring the effect of a cancer drug or therapy directed to said cancer, in a subject which comprises detecting the presence or level of antibodies capable of immunospecific binding to LY75, or one or more fragments thereof.

20. The method according to any one of claims 17 to 19 wherein the presence of LY75, or one or more fragments thereof, or the presence of nucleic acid encoding LY75, or the presence or level of antibodies capable of immunospecific binding to LY75, or one or more fragments thereof, is detected by analysis of a biological sample obtained from the subject.

21. The method according to any one of claims 17 to 20 wherein the presence of LY75, or one or more fragments thereof, is detected using an affinity reagent which binds to LY75.

22. The method according to claim 21 wherein the affinity reagent is as defined in any one of claims 3 to 8.

23. The method according to claim 21 or 22 wherein the affinity reagent contains or is conjugated to a detectable label.

24. The method according to any one of claims 1 to 23 wherein the subject is a human.

25. A method for identifying an agent for the treatment or prophylaxis of a cancer selected from the group consisting of lymphoma, myeloma, leukaemia, thyroid cancer, bladder cancer, breast cancer, gastric cancer, esophagus cancer, head and neck cancer and skin cancer wherein LY75 is expressed in said cancer, wherein the method comprises (a) contacting LY75, or one or more fragments thereof, with a candidate agent; and (b) determining whether the agent binds to LY75, or said one or more fragments thereof.

26. The method according to claim 25 further comprising the step of testing the ability of an agent which binds to LY75, or one or more fragments thereof, to inhibit said cancer.

27. The method according to claim 25 or 26 further comprising the step of testing the ability of an agent which binds to LY75 to modulate a physiological function of LY75, inhibit ligand binding to LY75 and/or inhibit a signal transduction pathway mediated by LY75.

28. The method according to any one of claims 2 to 27, wherein the lymphoma is selected from the group consisting of Diffuse Large B-Cell Lymphoma, B-Cell Lymphoma, Follicular Lymphoma, Mantle Cell Lymphoma, Lymphoma of Mucosa-Associated Lymphoid Tissue (MALT), T-Cell/Histiocyte-Rich B-Cell Lymphoma, Burkitt Lymphoma, Lymphoplasmacytic Lymphoma, Small Lymphocytic Lymphoma, Marginal Zone Lymphoma, T-Cell Lymphoma, Peripheral T-Cell Lymphoma, Anaplastic Large Cell Lymphoma and AngioImmunoblastic T-Cell Lymphoma.

29. The method according to any one of claims 2 to 27, wherein the cancer is non-Hodgkin's lymphoma, multiple myeloma or Triple-Negative breast cancer.

...

CLAIMS:

1. The use of an affinity reagent which binds to LY75 in the manufacture of a medicament for the treatment or prophylaxis of a cancer selected from the group consisting of lymphoma, myeloma, leukaemia, thyroid cancer, bladder cancer, breast cancer, gastric cancer, esophagus cancer, head and neck cancer and skin cancer wherein LY75 is expressed in said cancer and wherein said affinity reagent is conjugated to a therapeutic moiety.

2. The use according to claim 1, wherein the lymphoma is selected from the group consisting of non-Hodgkin's lymphoma, Diffuse Large B-Cell Lymphoma, B-Cell Lymphoma, Follicular Lymphoma, Mantle Cell Lymphoma, Lymphoma of Mucosa-Associated Lymphoid Tissue (MALT), T-Cell/Histiocyte-Rich B-Cell Lymphoma, Burkitt Lymphoma, Lymphoplasmacytic Lymphoma, Small Lymphocytic Lymphoma, Marginal Zone Lymphoma, T-Cell Lymphoma, Peripheral T-Cell Lymphoma, Anaplastic Large Cell Lymphoma and AngioImmunoblastic T-Cell Lymphoma.

3. The use according to claim 1 or claim 2, wherein the affinity reagent binds specifically to LY75.

4. The use according to any one of claims 1 to 3, wherein the affinity reagent is an antibody, a monoclonal antibody, a chimeric antibody, a human antibody, a humanized antibody, a single chain antibody, a defucosylated antibody or a bispecific antibody, or a functional fragment thereof or antigen-binding portion thereof, or an antibody mimetic.

5. The use according to claim 4, wherein

a) the functional antibody fragment is a UniBody, a domain antibody or a Nanobody; or

b) the antibody mimetic is an Affibody, a DARPin, an Anticalin, an Avimer, a Versabody or a Duocalin.

6. The use according to any one of claims 1 to 5, wherein the therapeutic moiety is a cytotoxic moiety or a radioactive isotope.

7. The use according to claim 6 wherein the cytotoxic moiety is selected from the group consisting of duocarmycins, calicheamicins, maytansines and auristatins, or derivatives thereof.

8. The use according to claim 6 or 7, wherein the affinity reagent is an antibody drug conjugate.

9. A method of detecting, diagnosing and/or screening for or monitoring the progression of a cancer selected from the group consisting of lymphoma, myeloma, leukaemia, thyroid cancer, bladder cancer, breast cancer, gastric cancer, esophagus cancer, head and neck cancer and skin cancer wherein LY75 is expressed in said cancer, or of monitoring the effect of a cancer drug or therapy directed to said cancer, in in a biological sample obtained from a subject which comprises:-

a) detecting the presence or level of LY75, or one or more fragments thereof, or the presence or level of nucleic acid encoding LY75, or which comprises detecting a change in the level of either thereof in said subject; or

b) detecting the presence or level of antibodies capable of immunospecific binding to LY75, or one or more fragments thereof.

10. The method according to claim 9 which comprises detecting the presence of LY75, or one or more fragments thereof, or the presence of nucleic acid encoding LY75, in which either (a) the presence of an elevated level of LY75, or said one or more fragments thereof, or an elevated level of nucleic acid encoding LY75 in the subject as compared with the level in a healthy subject, or (b) the presence of a detectable level of LY75, or said one or more fragments thereof, or a detectable level of nucleic acid encoding LY75 in the subject as compared with a corresponding undetectable level in a healthy subject is indicative of the presence of said cancer in said subject.

11. The method according to any one of claims 9 to 10 wherein the presence of LY75, or one or more fragments thereof, is detected using an affinity reagent which binds to LY75.

12. The method according to claim 11 wherein the affinity reagent is as defined in any one of claims 3 to 8.

13. The method according to claim 11 or 12 wherein the affinity reagent contains or is conjugated to a detectable label.

14. The use according to any one of claims 1 to 8 or the method according to any one of claims 9 to 13 wherein the subject is a human.

15. A method for identifying an agent for the treatment or prophylaxis of a cancer selected from the group consisting of lymphoma, myeloma, leukaemia, thyroid cancer, bladder cancer, breast cancer, gastric cancer, esophagus cancer, head and neck cancer and skin cancer wherein LY75 is expressed in said cancer, wherein the method comprises (a) contacting LY75, or one or more fragments thereof, with a candidate agent; and (b) determining whether the agent binds to LY75, or said one or more fragments thereof.

16. The method according to claim 15 further comprising the step of testing the ability of an agent which binds to LY75, or one or more fragments thereof, to:-

a) inhibit said cancer; and/or

b) to modulate a physiological function of LY75, inhibit ligand binding to LY75 and/or inhibit a signal transduction pathway mediated by LY75.

17. The use according to claim 1 or the method according to claim 16, wherein the cancer is multiple myeloma or Triple-Negative breast cancer.