Patent Claims

1. Use of an inhibitor of the interaction between the PD-1 receptor and its ligand PD-L1 for the manufacture of a medicament for treating cancer in a subject.

2. Use according to Claim 1, wherein the cancer is lung cancer, bladder cancer, squamous cell carcinoma of the head and neck, renal cell carcinoma, gastric cancer, Merkel cell carcinoma, gastric / gastroesophageal junction cancer, breast cancer, colorectal cancer, castration-resistant prostate cancer, melanoma, ovarian cancer, adrenocortical carcinoma, mesothelioma, esophageal squamous cell carcinoma (ESCC), thymoma, adrenocortical carcinoma or urothelial carcinoma.

3. Use according to any one of Claims 1 or 2, wherein the subject is human, the PD-1 receptor is human PD-1 receptor, and PD-L1 is human PD-L1.

4. Use according any one of Claims 1-3, wherein the inhibitor binds to PD-L1.

5. Use according to any one of Claims 1-4, wherein the cancer is identified as a PD-L1 positive cancer.

6. Use according to Claim 4 or 5, wherein the inhibitor is an anti-PD-L1 antibody.

7. Use according to Claim 6, wherein the anti-PD-L1 antibody comprises in its heavy chain the three complementarity determining regions (CDR's) according to SEQ ID NO's 1, 2 and 3, and in its light chain the three complementarity determining regions (CDRs) according to SEQ ID NOs: 4, 5 and 6.

8.Use according to Claim 6 or 7, wherein the anti-PD-L1 antibody is Avelumab, having the heavy chain sequences according to SEQ ID NOs: 7 or 8 and the light chain sequence according to SEQ ID NO:9.

9. Use according to Claim 6, 7 or 8, wherein the anti-PD-L1 antibody is to be administered at a dose of 10 mg/kg body weight every other week.

10. Use according to anyone of Claims 6-9, wherein the anti-PD-L1 antibody is to be administered as an intravenous infusion.

11. Use according to Claim 10, wherein the anti-PD-L1 antibody is to be administered as a one hour intravenous infusion.

12. Use according to any one of Claims 1 -11, wherein the method results in an objective response, preferably a complete response or a partial response.

13. Use according to any one of Claims 1-12, wherein the subject has previously received chemotherapy.

14. Use according to claim 13, wherein the chemotherapy comprises a platinum containing chemotherapeutic agent.

15. Use according to claim 14, wherein the chemotherapy is platinum-containing doublet chemotherapy.

16. Use according to any one of Claims 2-15, wherein in the cancer is non-small cell lung cancer.

17. Use according to Claim 16, wherein the non-small cell lung cancer has progressed after chemotherapy.

18. Use according to Claim 16 or 17, wherein the cancer is locally advanced unresectable, metastatic, or recurrent non-small cell lung cancer.

19. Use according to any one of Claims 2-15, wherein the cancer is Merkel cell carcinoma.

20. Use according to Claim 19, wherein the Merkel cell carcinoma is metastatic.

21. Use according to Claim 19 or 20, wherein the Merkel carcinoma has progressed after chemotherapy.

22. Use according to any one of Claims 2-15, wherein the cancer is mesothelioma.

23. Use according to Claim 22, wherein the mesothelioma is advanced and unresectable.

24. Use according to any one of Claims 2-15, wherein the cancer is ovarian cancer.

25. Use according to Claim 24, wherein the ovarian cancer is heavily pretreated, recurrent or refractory.

26. Use according to any one of Claims 2-15, wherein the cancer is gastric or gastroesophageal junction cancer.

27. Use according to Claim 26, wherein the gastric or gastroesophageal junction cancer has progressed after chemotherapy.

28. Use according to any one of Claims 2-15, wherein the cancer is urothelial carcinoma.

29. Use according to Claim 28, wherein the urothelial carcinoma is locally advanced or metastatic.

30. Use according to any one of Claims 2-15, wherein the cancer is breast cancer.

31. Use according to Claim 30, wherein the breast cancer is locally advanced or metastatic.

312. Use according to Claim 30 or 31, wherein the subject has previously received chemotherapy.

33. Use according to Claim 32, wherein the chemotherapy comprised the use of taxane and/or anthracycline.

34. Use according to Claim 26 or 27, wherein the cancer treatment is a third-line treatment of unresectable, recurrent, or metastatic gastric or gastroesophageal junction adenocarcinoma.

35. Use of Claim 29, wherein the locally advanced or metastatic urothelial cancer has not progressed during or following completion of first line chemotherapy.

36. Use according to any one of Claims 2-15, wherein the cancer is thymoma.

37. Use according to Claim 36, wherein the wherein the subject has previously received chemotherapy and/or radiotherapy.

38. Use according to any one of Claims 2-15, wherein the cancer is adrenocortical carcinoma.

39. Use according to Claim 38, wherein the adrenocortical carcinoma is metastatic.

40. Use according to Claim 39, wherein the metastatic adrenocortical carcinoma has progressed after platinum-based chemotherapy.