CLAIMS

1. A use of an anti-PD-1 antibody or an antigen binding fragment thereof in the manufacture of a medicament in the treatment of hepatocellular carcinoma HCC in human,

wherein the anti-PD-1 antibody comprises CDR-H1, CDR-H2 and CDR-H3 represented by SEQ ID NOs: 11, 32, 13, respectively; and CDR-L1, CDR-L2 and CDR-L3 represented by SEQ ID NOs: 61, 15, 16, respectively, and

wherein the anti-PD1 antibody comprises an IgG4 heavy chain constant domain that minimizes FcγR binding on macrophages,

and wherein the IgG4 heavy chain constant domain comprises SEQ ID NO: 88.

2. The use of Claim 1, wherein the anti-PD-1 antibody comprises a heavy chain variable region Vh represented by SEQ ID NO: 24 and a light chain variable region Vk represented by SEQ ID NO: 26, and the IgG4 heavy chain constant domain comprises SEQ ID NO: 88.

3. The use according to Claims 1-2, wherein the HCC is an advanced HCC and/or a metastatic HCC.

4. The use of any one of Claims 1-2, wherein the HCC is a virus infection related HCC.

5. The use of Claim 4, wherein the virus infection related HCC is HBV-infected HCC, HCV-infected HCC, or HBV/HCV co-infected HCC.

6. The use of Claim 5, wherein the virus infection related HCC is an advanced HBV-infected HCC, metastatic HBV-infected HCC, advanced HCV-infected HCC, or metastatic HCV-infected HCC.

7. The use of Claim 6, wherein the virus infection related HCC is an advanced HBV-infected HCC, or metastatic HBV-infected HCC.

8. The use of any one of Claims 1-7, wherein the anti-PD-1 antibody is to be administered at a dose of 0.5-10 mg/kg QW, or Q2W, or Q3W, or Q4W.

9. The use of any one of Claims 1-7, wherein the anti-PD-1 antibody is to be administrated at a dose of 0.5-10 mg/kg QW or Q2W or Q3W.

10. The use of any one of Claims 1-7, wherein the Anti-PD-1 antibody is to be administrated at a dose of 0.5-10 mg/kg Q2W or Q3W.

11. The use of any one of Claims 1-7, wherein the anti-PD-1 antibody is to be administrated parenterally at a dose of 0.5-5 mg/kg Q2W, 5-10 mg/kg Q2W, or 2-5 mg/kg Q3W.

12. The use of any one of Claims 1-7, wherein the anti-PD-1 antibody is to be administrated parenterally at a dose of 0.5 mg/kg Q2W, 5 mg/kg Q2W, 10 mg/kg Q2W, 2 mg/kg Q3W or 5 mg/kg Q3W.

13. The use of any one of Claims 1-7, wherein the anti-PD-1 antibody is to be administered parenterally at a dose of about 200 mg.

14. The use of Claim 13, wherein the anti-PD-1 antibody is to be administered Q3W.

15. The use of Claim 4, wherein the virus infection related HCC has a HBV viral load <200 IU/mL (~1000 cps/mL).

16. The use of Claim 4, wherein the virus infection related HCC has active HBV infection need to be on anti-HBV suppression for ⩾3 months during anti-PD-1 antibody treatment and for 6 months after cessation of ~~during~~ anti-PD-1 antibody treatment.