CLAIMS

WHAT IS CLAIMED IS:

1. A pharmaceutical formulation of an anti-PD-1 monoclonal antibody, wherein the pharmaceutical formulation comprises an anti-PD-1 monoclonal antibody, a citrate-sodium citrate buffer solution, a protein protectant, and a surfactant, wherein

the content of the citrate-sodium citrate buffer solution is 10-30 mM;

the protein protectant is mannitol or sucrose and the content thereof is 1%-5% by mass/volume, wherein the mass/volume used is in g/L;

the surfactant is polysorbate 80 and the content thereof is 0.01%-0.05% by volume;

and the anti-PD-1 monoclonal antibody has a heavy chain variable region shown in SEQ ID NO. 7 and a light chain variable region shown in SEQ ID NO. 8.

2. The pharmaceutical formulation according to claim 1, wherein the pharmaceutical formulation further contains sodium chloride as an isotonic regulator, and the content thereof is 0.1%-0.5% by mass/volume, wherein the mass/volume used is in g/L.

3. The pharmaceutical formulation according to claim 1 or 2, wherein the pH of the pharmaceutical formulation is 5.0-6.5.

4. The pharmaceutical formulation according to any one of claims 1-3, wherein the protein concentration of the anti-PD-1 monoclonal antibody is 5-50 mg/ml.

5. The pharmaceutical formulation according to any one of claims 1-4, wherein the anti-PD-1 monoclonal antibody is an h1G4 antibody, which comprises a heavy chain shown in SEQ ID NO. 10 and a light chain shown in SEQ ID NO. 9.

6. The pharmaceutical formulation according to any one of claims 1-5, wherein the pharmaceutical formulation contains 10 mg/ml of the anti-PD-1 monoclonal antibody, 20 mmol/L of the citrate-sodium citrate buffer solution, 3% of mannitol by mass/volume, 0.02% of polysorbate 80 by volume, and 0.3% of sodium chloride by mass/volume, pH 5.5,

wherein the mass/volume used is in g/L.

7. The pharmaceutical formulation according to any one of claims 1-5, wherein the pharmaceutical formulation contains 10 mg/ml of the anti-PD-1 monoclonal antibody, 20 mmol/L of the citrate-sodium citrate buffer solution, 1%-3% of sucrose by mass/volume, 0.02% of polysorbate 80 by volume, and 0.3% of sodium chloride by mass/volume, pH 5.5, wherein the mass/volume used is in g/L.

8. Use of the pharmaceutical formulation according to any one of claims 1-7 in the preparation of a liquid formulation or a lyophilized formulation for injection.