CLAIMS

1. Use of a composition in the manufacture of a medicament for inducing immunity to an active ingredient, wherein the composition comprises:

a nucleic acid, a polypeptide or a combination thereof as the active ingredient;

1,6-dioleoyl triethylenetetramide as a cationic compound;

an A-B type block copolymer including a hydrophilic A block of monomethoxy polyethylene glycol and a hydrophobic B block of polylactide as an amphiphilic block copolymer; and

sodium polylactate (PLANa) as a salt of polylactic acid,

wherein the content of the cationic compound is 3 to 8 parts by weight, the content of the amphiphilic block copolymer is 15 to 30 parts by weight, and the content of the salt of polylactic acid is 5 to 30 parts by weight, based on 1 part by weight of the active ingredient;

wherein the active ingredient forms a complex through electrostatic interaction with the cationic compound, and the complex is entrapped in a nanoparticle structure of the amphiphilic block copolymer and the salt of polylactic acid;

wherein the composition is for delivering the active ingredient to the spleen; and

wherein the composition is for treating or preventing cancer by inducing immunity to the active ingredient.

2. The use according to Claim 1, wherein the nucleic acid expresses a tumor antigen.

3. The use according to Claim 1, wherein the polypeptide is one that can be recognized as a tumor antigen.

4. The use according to Claim 1, wherein the surface charge of the nanoparticles is -40 to 40 mV.

5. The use according to Claim 1, wherein the hydrophobic block B is modified by chemically bonding tocopherol, cholesterol or a fatty acid having 10 to 24 carbon atoms to a hydroxyl group at the terminal thereof.

6. The use according to Claim 1, wherein the hydrophilic A block has a number average molecular weight of 200 to 50,000 Dalton, and the hydrophobic B block has a number average molecular weight of 50 to 50,000 Dalton.

7. The use according to Claim 2 or 3, wherein the composition is for treating or preventing cancer related to the tumor antigen.

8. The use according to Claim 2 or 3, wherein the composition is for use as a vaccine against cancer related to the tumor antigen.

9. A method for preparing a composition for inducing immunity to an active ingredient, comprising

(a) mixing a nucleic acid, a polypeptide or a combination thereof as the active ingredient, 1,6-dioleoyl triethylenetetramide as a cationic compound, an A-B type block copolymer including a hydrophilic A block of monomethoxy polyethylene glycol and a hydrophobic B block of polylactide as an amphiphilic block copolymer and sodium polylactate (PLANa) as a salt of polylactic acid with a solvent which is an aqueous solution, a water-miscible

organic solvent or a combination thereof; and

(b) adding an aqueous solvent to the mixture of step (a) and mixing them;

wherein the mixing amount of the cationic compound is 3 to 8 parts by weight, the mixing amount of the amphiphilic block copolymer is 15 to 30 parts by weight, and the mixing amount of the salt of polylactic acid is 5 to 30 parts by weight, based on 1 part by weight of the active ingredient;

wherein the active ingredient is entrapped in the nanoparticle structure of the amphiphilic block copolymer and the salt of polylactic acid;

wherein the composition is for delivering the active ingredient to the spleen; and

wherein the composition is for treating or preventing cancer by inducing immunity to the active ingredient.