Claims

1. A recombinant virus-like particle comprising two or more different epitopes or different proteins comprising epitopes which are selected either (a) from different viral strains of the same virus and/or (b) from different serotypes of the same virus and/or (c) from different viral strains specific for different hosts, wherein said virus-like particle is encoded by a baculoviral vector and produced in insect cells.

2. The recombinant virus-like particle according to claim 1 comprising three or more different epitopes or different proteins comprising epitopes.

3. The recombinant virus-like particle according to claim 1 comprising four or more different epitopes or different proteins comprising epitopes.

4. The recombinant virus-like particle according to claim 1 comprising six, nine or twelve epitopes or different proteins comprising epitopes.

5. The recombinant virus-like particle according to any of the preceding claims wherein the epitopes are from three or more different virus strains or serotypes.

6. The recombinant virus-like particle according to any of the preceding claims further comprising B- and/or T-cell epitopes.

7. The recombinant virus-like particle according to any of the preceding claims further comprising proteins forming a complete virus-like surface and optionally capsid and/or nucleopore proteins.

8. The recombinant virus-like particle according to any of the preceding claims further comprising fluorescent proteins, and/or proteins useful for purification purposes of the particles or for attaching a label.

9. The recombinant virus-like particle according to any of the preceding claims wherein the virus is influenza virus.

10. The recombinant virus-like particle according to any of the preceding claims wherein the virus is human papilloma virus.

11. A baculoviral vector encoding a recombinant virus-like particle according to any of claims 1 to 10.

12. The vector according to claim 11 comprising a polynucleotide sequence selected from SEQ ID NO: 1 to 5.

13. A host cell comprising a vector according to claim 11 or 12.

14. A vaccine comprising a recombinant virus-like particle according any of claims 1 to 10.

Claims

1. A single baculoviral vector encoding a recombinant virus-like particle comprising two or more different surface proteins comprising epitopes, wherein the surface proteins are selected from (a) different viral strains of the same virus, (b) different serotypes of the same virus or (c) different viral strains specific for different hosts.

2. The baculoviral vector according to claim 1, wherein said virus-like particle comprises three or more different epitopes or different proteins comprising epitopes.

3. The baculoviral vector according to claim 1, wherein said virus-like particle comprises four or more or 10 different epitopes or different proteins comprising epitopes.

4. The baculoviral vector according to claim 1, wherein said virus-like particle comprises six, nine or twelve epitopes or different proteins comprising epitopes.

5. The baculoviral vector according to any one of the preceding claims, wherein the epitopes are from three or more different virus strains or serotypes.

6. The baculoviral vector according to any one of the preceding claims, wherein said virus-like particle further comprises B- and/or T-cell epitopes.

7. The baculoviral vector according to any one of the preceding claims, wherein said virus-like particle further comprises proteins forming a complete virus-like surface and optionally capsid and/or nucleopore proteins.

8. The baculoviral vector according to any one of the preceding claims, wherein said virus-like particle further comprises fluorescent proteins, proteins useful for purification purposes of the particles or for attaching a label.

9. The baculoviral vector according to any one of the preceding claims, wherein the virus is an influenza virus.

10. The baculoviral vector according to any one of claims 1 to 8, wherein the virus is a human papilloma virus.

11. The baculoviral vector according to claim 1, comprising a polynucleotide sequence selected from SEQ ID NOs: 1 to 5.

12. A host cell comprising a baculoviral vector according to any one of the preceding claims.