

CLAIMS

WHAT IS CLAIMED IS:

1. A immunogenic composition comprising:

a recombinant protein including a sequence selected from SEQ ID NO: 1; or

5 a nucleic acid molecule encoding the recombinant protein.

2. The immunogenic composition of claim 1, wherein the recombinant protein is fused with a secreted signal peptide.

3. The immunogenic composition of claim 1, further comprising immunogenic compounds, adjuvants, pharmaceutically acceptable carriers, stabilisers or
10 preservatives.

4. A SARS-CoV-2 vaccine comprising:

a recombinant protein including a sequence selected from SEQ ID NO: 1; or

a nucleic acid molecule encoding the recombinant protein.

5. The vaccine of claim 4, wherein the recombinant protein is fused with nucleocapsid
15 phosphoprotein protein of SARS-CoV-2, envelope protein of SARS-CoV-2 or membrane protein of SARS-CoV-2.

6. The vaccine of claim 4, wherein the recombinant protein encoded by the nucleic acid molecule is fused with nucleocapsid phosphoprotein protein of SARS-CoV-2,

envelope protein of SARS-CoV-2 or membrane protein of SARS-CoV-2.

7. The vaccine of claim 4, further comprising immunogenic compounds, adjuvants, pharmaceutically acceptable carriers, stabilisers or preservatives.

8. A vector comprising a nucleic acid molecule encoding a recombinant protein

5 including a sequence selected from SEQ ID NO: 1.

9. The vector of claim 8, wherein the recombinant protein encoded by the nucleic acid molecule is fused with nucleocapsid phosphoprotein protein of SARS-CoV-2, envelope protein of SARS-CoV-2 or membrane protein of SARS-CoV-2.

10. The vector of claim 8, wherein the vector is selected from the group consisting
10 of baculovirus, vaccinia virus, avipoxvirus, adenovirus, alphavirus, rhabdovirus, and herpesvirus.

11. The vector of claim 10, wherein the vector is baculovirus.

12. A immunogenic composition comprising:

a nucleic acid molecule including a sequence selected from SEQ ID NO: 6.

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