CLAIMS

1. A method for determining whether or not virus-neutralizing antibodies are present in a sample obtained from a subject, comprising the following steps:

- providing extracellular vesicles and a label, wherein the extracellular vesicles are non-infectious, comprise one or more viral glycoprotein(s) and are detectable via the label,
- contacting the sample with said extracellular vesicles and cells, which are capable of taking up said extracellular vesicles, wherein the one or more viral glycoprotein(s) is/ are able to target a receptor of said cells and is/ are fusogenic, and
- determining whether or not said cells take up said extracellular vesicles;
  wherein a reduced uptake of said extracellular vesicles by said cells in comparison to a control, wherein said cells and said extracellular vesicles are contacted, but without said sample, is indicative of the presence of virus-neutralizing antibodies.

2. The method of claim 1, wherein the label is a protein selected from the group consisting of beta-galactosidase, beta-lactamase, beta-glucuronidase, a luciferase and any combination thereof.

3. The method of claim 1 or claim 2, wherein the receptor is selected from the group consisting of angiogenin converting enzyme 2 (ACE2), CD46, CD150 (signaling lymphozyte-activation molecule SLAM), lysosomal associated membrane protein 1 (LAMP1), T-cell immunoglobin mucin domain-1 (TIM-1), sialyl-(alpha-2,3)-galactosidase-receptor, sialyl-(alpha-2,6)-galactosidase-receptor, CD21 and a MHC class II receptor.

4. The method of any one of the previous claims, wherein the label is a split protein, wherein a first part of the split protein is comprised in the extracellular vesicles and a second part of the split protein is comprised in the cells, and wherein the first and the second part are able to form a complex.

5. The method of any one of the previous claims 1 to 3, wherein the extracellular vesicles are detectable via the label, wherein the label is attached to an extracellular vesicle protein comprised in the extracellular vesicles, preferably wherein the extracellular vesicles comprise the extracellular vesicle protein and the label as a fusion protein, preferably wherein the extracellular vesicle protein is selected from the group consisting of a tetraspanin; more preferably CD63, CD40, CD81, CD9, CD37, CD53, CD54, CD151, CD82 and TSPAN-8; an integrin; more preferably alpha-3, alpha-5, alpha-V, alpha-6, beta-1 or beta-3 integrin; and a type I membrane protein.

6. The method of claim 4, wherein the first part of the split protein, which is comprised in the extracellular vesicles, is attached to an extracellular vesicle protein of the extracellular vesicles, or attached to a viral capsid-protein or a viral nucleo-protein of the extracellular vesicles, or attached to a viral tegument protein of the extracellular vesicles, or attached to the one or more viral glycoprotein(s) of the extracellular vesicles, preferably wherein the first part of the split protein is attached to a protein of the extracellular vesicles selected from the group consisting of a tetraspanin; more preferably CD63, CD40, CD81, CD9, CD37, CD53, CD54, CD151, CD82 and TSPAN-8; an integrin; more preferably alpha-3, alpha-5, alpha-V, alpha-6, beta-1 or beta-3 integrin; and a type I membrane protein, and/or wherein the second part of the split protein, which is comprised in the cells, is attached to a protein of the cell selected from the group consisting of a tetraspanin; preferably CD63, CD40, CD81, CD9, CD37, CD53, CD54, CD151, CD82 and TSPAN-8; an integrin; preferably alpha-3, alpha-5, alpha-V, alpha-6, beta-1 or beta-3 integrin; SNX3, a Pleckstrin domain, an N-myristoylation domain and a type I membrane protein.

7. The method of claim 5, wherein the extracellular vesicle protein is a viral extracellular vesicle protein, preferably a viral extracellular vesicle protein selected from the group consisting of a corona virus protein; more preferably the E-, M-, S- or N-protein of a SARS-CoV-virus, even more preferably the E-, M-, S- or N-protein of the SARS-CoV-2-virus; an Epstein-Barr-virus-protein, a measles virus protein, an influenza virus protein, a parainfluenza virus protein, a human respiratory syncytial virus protein, an Ebola virus, a hanta virus protein, a Lassa virus protein, and any truncated form thereof.

8. The method of any one of the previous claims 1 to 3, wherein the extracellular vesicles are detectable via the label, wherein the label is attached to a viral capsid-protein or a viral nucleo-protein and wherein the one or more viral glycoprotein(s) and the viral capsid-protein or the viral nucleo-protein are from the same virus, wherein the viral capsid-protein is selected from the group consisting of HIV-1, and a viral capsid-protein of a herpes virus or wherein the viral nucleo-protein is selected from the group consisting of a viral nucleo-protein from an Epstein-Barr virus, a measles virus, an influenza virus, a parainfluenza virus, a human respiratory syncytial virus, an Ebola virus, a Marburg virus, a hanta virus, a Lassa virus and the nucleo-protein N of a SARS-CoV-virus, preferably the nucleo-protein N of the SARS-CoV-2-virus.

9. The method of any one of the previous claims 1 to 3, wherein the extracellular vesicles are detectable via the label, wherein the label is attached to the one or more viral glycoprotein(s) of the extracellular vesicles, preferably wherein the one or more viral glycoprotein(s) is/ are not the M-, E- or S-protein of the SARS-CoV-2-virus.

10. The method of any one of the previous claims, wherein the virus-neutralizing antibodies are neutralizing antibodies against a virus selected from the group consisting of a coronavirus; preferably a SARS-CoV-virus, more preferably the SARS-CoV-2-virus; Epstein-Barr virus, measles virus, influenza virus, parainfluenza virus, human respiratory syncytial virus, Ebola virus, hanta virus and Lassa virus.

11. The method of any one of the previous claims, wherein the one or more viral glycoprotein(s) is/ are on the surface of the extracellular vesicles.

12. The method of any one of the previous claims, wherein the one or more viral glycoprotein(s) is/ are one or more viral glycoprotein(s) from a virus selected from the group consisting of a coronavirus; preferably a SARS-CoV-virus, more preferably the SARS-CoV-2-virus; an Epstein-Barr virus, measles virus, influenza virus, parainfluenza virus, human respiratory syncytial virus, Ebola virus, hanta virus and Lassa virus.

13. The method of any one of the previous claims, wherein the one or more viral glycoprotein(s) is/ are selected from the group consisting of haemagglutinin (HA), neuraminidase (NA), haemagglutinin-neuraminidase (HN), fusion (F) glycoprotein, glycoprotein polyprotein (GP) complex, Ebola virus glycoprotein, glycoprotein gp350 of Epstein-Barr virus, gB (BALF4) of Epstein-Barr virus, BILF2 of Epstein-Barr virus, gp42 (BZLF2) of Epstein-Barr virus, gH (BXLF2) of Epstein-Barr virus, gL (BKRF2) of Epstein-Barr virus, glycoprotein gp120 of HIV, M-, E- and S-protein of the SARS-CoV-virus.

14. The method of any one of the previous claims, wherein the extracellular vesicles are detectable via the label, wherein the label is attached to a viral tegument protein of the extracellular vesicles, and wherein the one or more viral glycoprotein(s) and the viral tegument protein are from the same virus.

15. The method of any one of the previous claims, wherein said cell is a cell selected from the group consisting of a primary cell, a cell line, an epithel cell, an immune cell and a cell line engineered to express a viral vector,
preferably a viral receptor selected from the group consisting of angiogenin converting enzyme 2 (ACE2), CD46, CD150 (signaling lymphozyte-activation molecule SLAM), lysosomal associated membrane protein 1 (LAMP1), T-cell immunoglobin mucin domain-1 (TIM-1), sialyl-(alpha-2,3)-galactosidase-receptor, sialyl-(alpha-2,6)-galactosidase-receptor, CD21 and a MHC class II receptor.

16. A method for determining whether or not virus-neutralizing antibodies are present in a sample obtained from a subject, comprising the following steps:
- providing a donor type of extracellular vesicles and a label, wherein the donor type of extracellular vesicles are non-infectious, comprise one or more viral glycoprotein(s) and are detectable via the label,
- contacting the sample with said donor type of extracellular vesicles and a recipient type of extracellular vesicles, which are capable of taking up said donor type of extracellular vesicles, and
- determining whether or not said recipient type of extracellular vesicles take up said donor type of extracellular vesicles;
wherein a reduced uptake of said donor type of extracellular vesicles by said recipient type of extracellular vesicles in comparison to a control, wherein said donor type of extracellular vesicles and said recipient type of extracellular vesicles are contacted, but without said sample, is indicative of the presence of virus-neutralizing antibodies.

17. The method according to claim 16, wherein the label is a split protein, wherein a first part of the split protein is comprised in the donor type of extracellular vesicles and a second part of the split protein is comprised in the recipient type of extracellular vesicles, and wherein the first and the second part of the split protein are able to form a complex.

18. A kit for determining whether or not virus-neutralizing antibodies are present in a sample obtained from a subject, comprising
- extracellular vesicles, which comprise one or more viral glycoprotein(s), and
- a label,
  being attached to an extracellular vesicle protein of the extracellular vesicles,
  being attached to a viral capsid-protein or viral nucleo-protein of the extracellular vesicles, wherein the one or more viral glycoprotein(s) and the viral capsid-protein or viral nucleo-protein are from the same virus,
  being attached to a viral tegument protein of the extracellular vesicles, and wherein the one or more viral glycoprotein(s) and the viral tegument protein are from the same virus, or
  being attached to the one or more viral glycoprotein(s) of the extracellular vesicles.

19. An *in vitro* method for screening (a) compound(s) for its/ their ability to neutralize a virus, comprising the following steps:
- providing extracellular vesicles and a label, wherein the extracellular vesicles are non-infectious, comprise one or more viral glycoprotein(s) and are detectable via the label,

- contacting said compound(s) with said extracellular vesicles and cells, which are capable of taking up said extracellular vesicles, wherein the one or more viral glycoprotein(s) is/ are able to target a receptor of said cells and is/ are fusogenic, and
- determining whether or not said cells take up said extracellular vesicles;

wherein a reduced uptake of said extracellular vesicles by said cells in comparison to a control, wherein said cells and said extracellular vesicles are contacted, but without said compound(s), is indicative of the ability of said compound(s) to neutralize said virus, preferably wherein the label is a split protein, wherein a first part of the split protein is comprised in the extracellular vesicles and a second part of the split protein is comprised in the cells, and wherein the first and the second part of the split protein are able to form a complex.

20. An *in vitro* method for screening (a) compound(s) for its/ their ability to neutralize a virus, comprising the following steps:

- providing a donor type of extracellular vesicles and a label, wherein the extracellular vesicles are non-infectious, comprise one or more viral glycoprotein(s) and are detectable via the label,
- contacting said compound(s) with said donor type of extracellular vesicles and a recipient type of extracellular vesicles, which are capable of taking up said donor type of extracellular vesicles, and
- determining whether or not said recipient type of extracellular vesicles take up said donor type of extracellular vesicles;

wherein a reduced uptake of said donor type of extracellular vesicles by said recipient type of extracellular vesicles in comparison to a control, wherein said donor type of extracellular vesicles and said recipient type of extracellular vesicles are contacted, but without said compound(s), is indicative of the ability of said compound(s) to neutralize said virus, preferably wherein the label is a split protein, wherein a first part of the split protein is comprised in the donor type of extracellular vesicles and a second part of the split protein is comprised in the recipient type of extracellular vesicles, and wherein the first and the second part of the split protein are able to form a complex.