Coronavirus Vaccination Advancement

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Abstract

Antigen and antibody for Coronavirus RNA Vaccination Advancement is presented with illustrations and it's uses.

Keywords: Coronavirus; RNA; Vaccination; Antigen; Antibody; SARS (Severe Acute Respiratory Syndrome)

Abbreviation

SARS: Severe Acute Respiratory Syndrome

Introduction

Illustrations of Coronavirus, it's features; B-cells remembers as a foreign alien that is damaging the system [1-3].
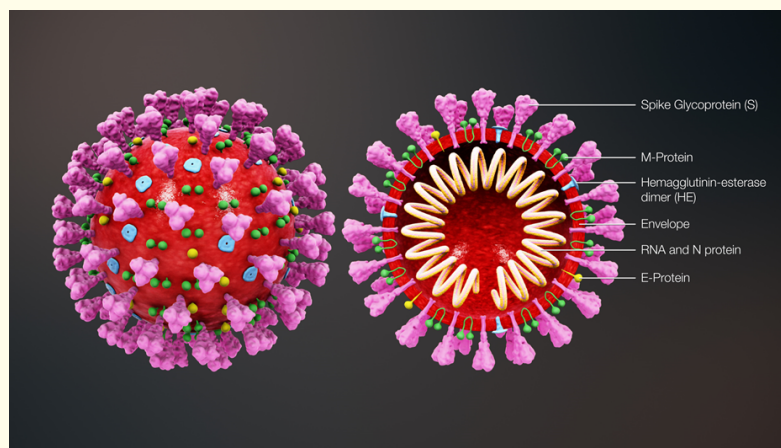
Materials and Methods

Figure 1: *Illustrates cross section of coronavirus.*

Antigens:

- Antigens are the substance that can induce an immune response.

- Usually proteins such as lipids, polysaccharides or nucleic acids.

- It is within the body or externally.

Antibodies:

- Antibodies are the proteins and recognizes and bind to antigens.

- It is within body.

Figure 2: *Illustrates when an antigen is induced in the body.*

Figure 3: *Illustrates lymphocytes remembers that it is a alien that is damaging the system.*
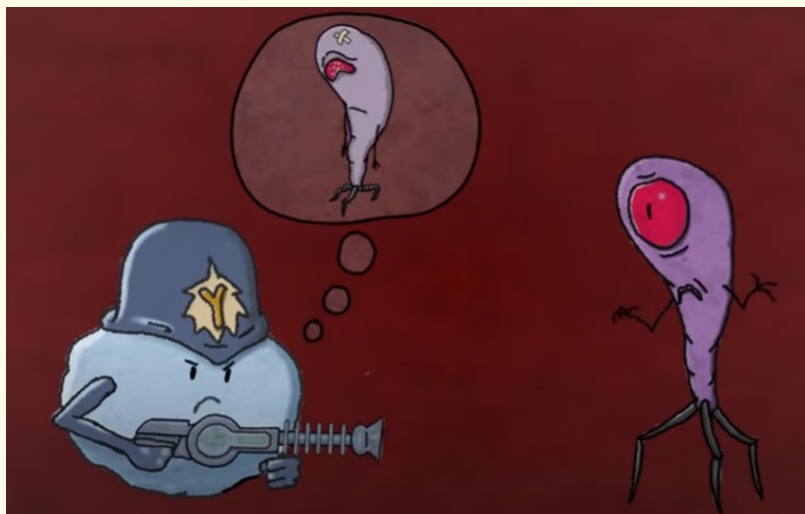
Figure 4: Illustrates when the coronavirus attacks the system, lymphocytes fights as it remembers that it is damaging the system.
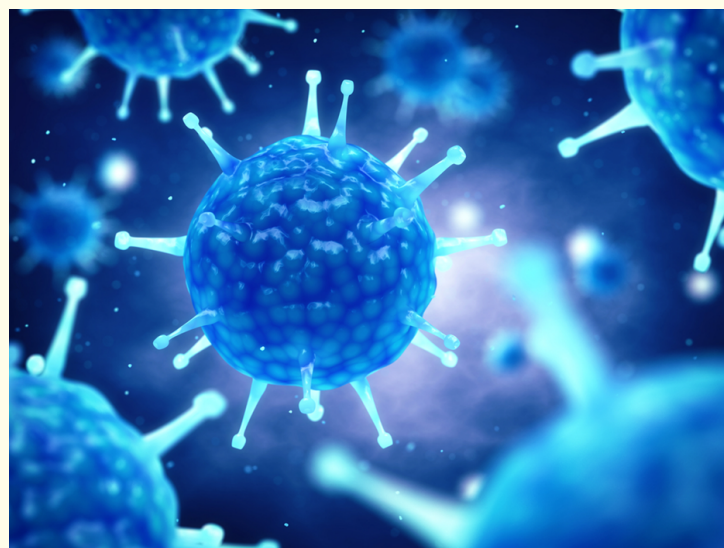

Figure 5: Illustrates antigen for coronavirus: SARS (Severe Acute Respiratory Syndrome) Coronavirus.

Membrane protein (Matrix) is a recombination of protein (is also called as Matrix or E1 glycoprotein) and consist of aa 182-216 immuno-dominant areas. It is produced in *E. coli*.
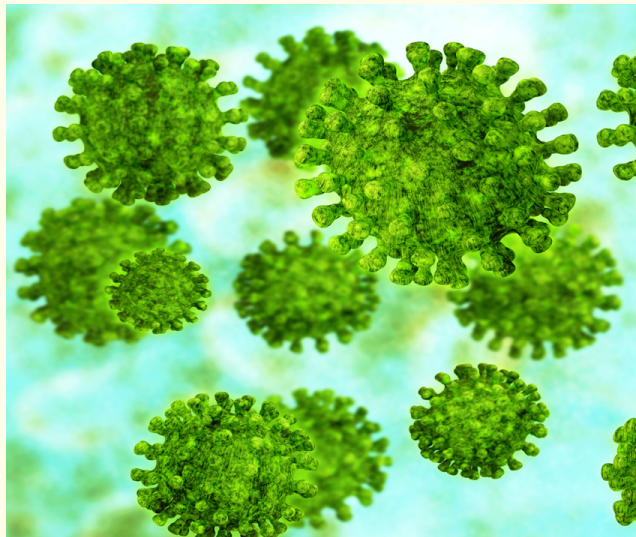
Figure 6: *Illustrates antigen for coronavirus: severe acute respiratory syndrome coronavirus nucleoprotein (aa 1-422) is a recombination of nucleocapsid antigen produced in E. coli with higher than 95% pureness. For use in western blot, ELISA and alternative immunoassays.*
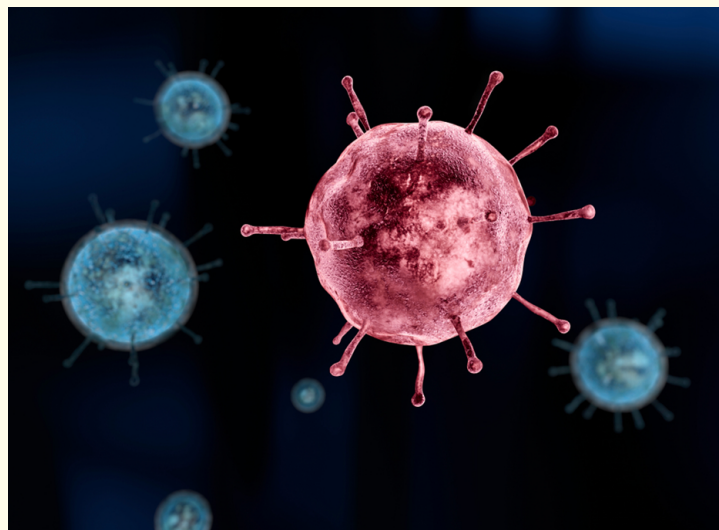

Figure 7: *Illustrates antigen for coronavirus: SARS coronavirus nucleoprotein (N-Term, Mid) is a recombination of protein (nucleocapsid core antigen) consist of N-term blended to an immunodominant region from the middle of the protein (aa 1-49, 192-220). It is produced in E. coli*
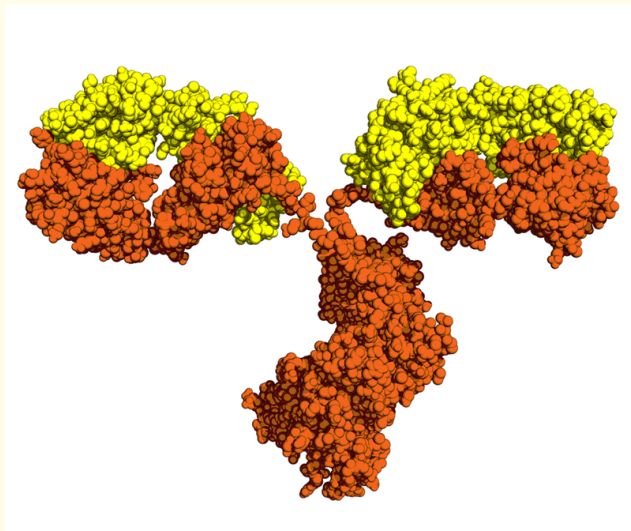
Figure 8: *Illustrates antibody for coronavirus: Mouse anti severe acute respiratory syndrome SARS-CoV membrane antibody (2H2C4) is a monoclonal antibody that is particular for human coronavirus and reacts with the SARS-CoV membrane glycoprotein (Matrix glycoprotein or E1). Antibody is suitable for use in ELISA and western blot.*
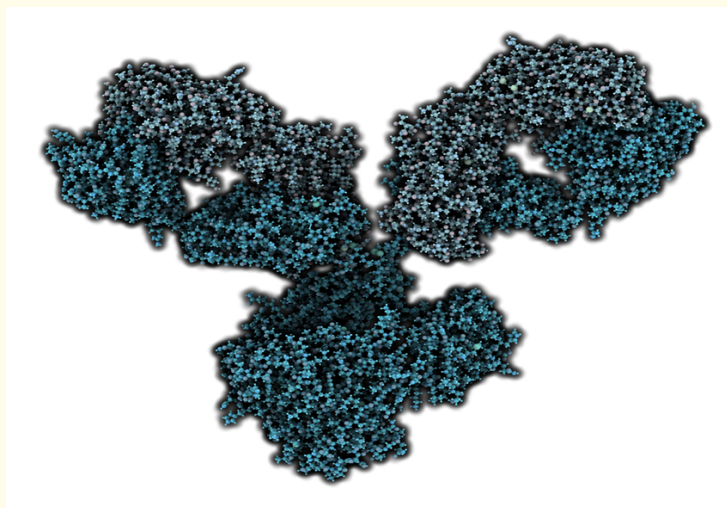

Figure 9: *Illustrates antibody for coronavirus: Mouse anti SARS coronavirus nucleoprotein antibody (3861). Mouse monoclonal antibody specific for SARS coronavirus nucleoprotein. Antibody is also volatile with the NP of SARS-CoV-2 (COVID-19) by ELISA.*
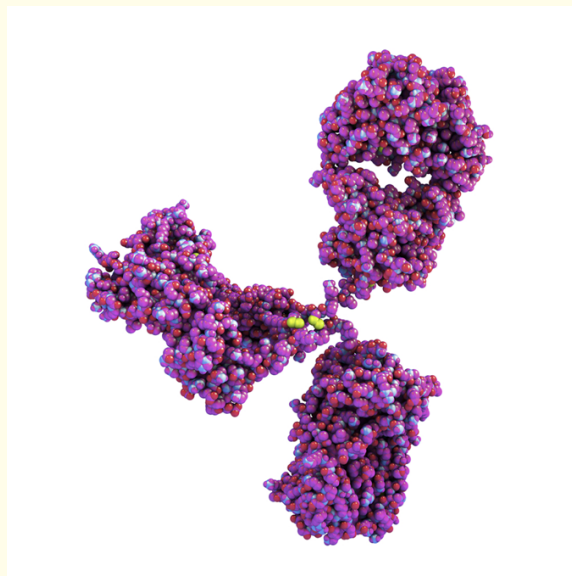
Figure 10: *Illustrates antibody for coronavirus: Mouse anti SARS coronavirus nucleoprotein antibody (3851). Mouse monoclonal antibody particular for SARS coronavirus nucleoprotein. Antibody is also volatile with the NP of SARS-CoV-2 (COVID-19) by ELISA.*
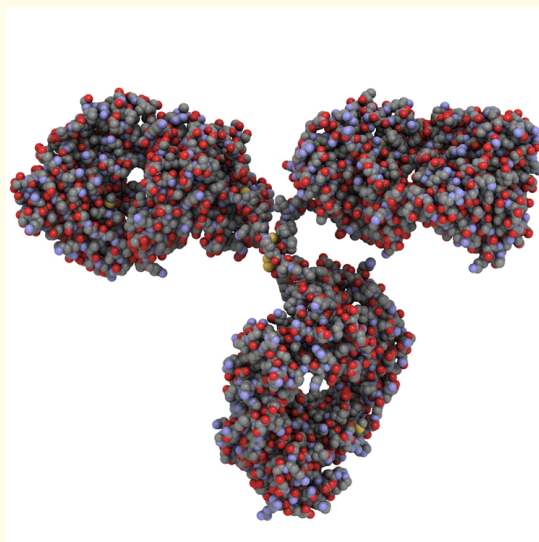

Figure 11: *Illustrates antibody for coronavirus: Mouse anti SARS coronavirus nucleoprotein antibody (3862). Mouse anti SARS coronavirus nucleoprotein antibody is particular for the nucleocapsid protein of SARS-CoV. It also recognizes the NP of SARS-CoV-2 (COVID-19) by ELISA. SARS-CoV-2, formerly known as the 2019 novel coronavirus (2019-nCoV), causes the epidemic COVID-19 disease.*
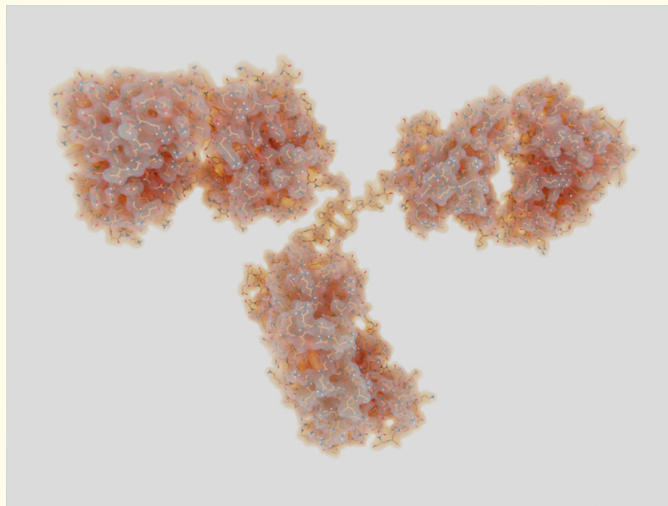
Figure 12: Illustrates antibody for coronavirus: Mouse anti SARS coronavirus nucleoprotein antibody (3864). Mouse anti SARS coronavirus nucleoprotein antibody is particular for the nucleocapsid protein of SARS-CoV. It also recognizes the NP of SARS-CoV-2 (COVID-19) by ELISA. SARS-CoV-2, formerly known as the 2019 novel coronavirus (2019-nCoV), causes the epidemic COVID-19 disease.
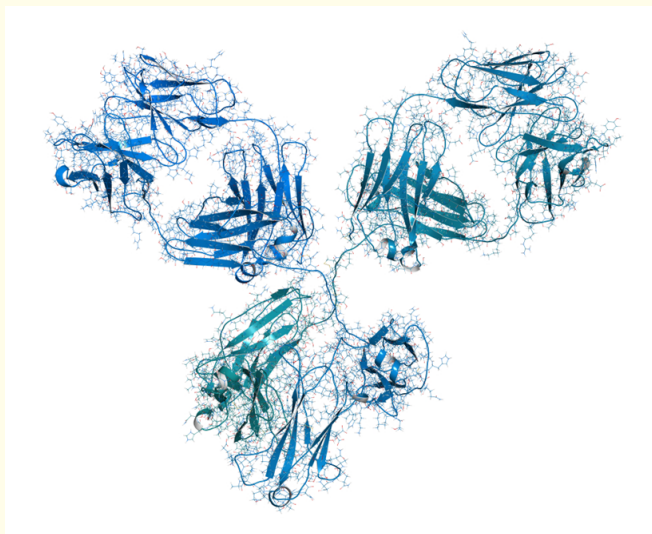

Figure 13: Illustrates antibody for coronavirus: Mouse anti SARS coronavirus nucleoprotein antibody (3863). Mouse anti SARS coronavirus nucleoprotein antibody is particular for the nucleocapsid protein of SARS-CoV. It also recognizes the NP of SARS-CoV-2 (COVID-19) by ELISA. SARS-CoV-2, formerly known as the 2019 novel coronavirus (2019-nCoV), causes the epidemic COVID-19 disease.

Figure 14: *Vaccination for COVID-19: Illustrates the vaccination for Covid-19. Illustration Credit: Marc-Antoine De La Vega.*

Results and Discussion

Presentation on coronavirus vaccination advancement is illustrated.

Conclusion

- Example of Antigen for Coronavirus is shown for body immune system (Lymphocytes) to produce faster antibodies.

- Example of Antibody for Coronavirus is shown to neutralize the viral infection of coronavirus.

Acknowledgements

Conflict of Interest

There are no conflicts of interest.

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