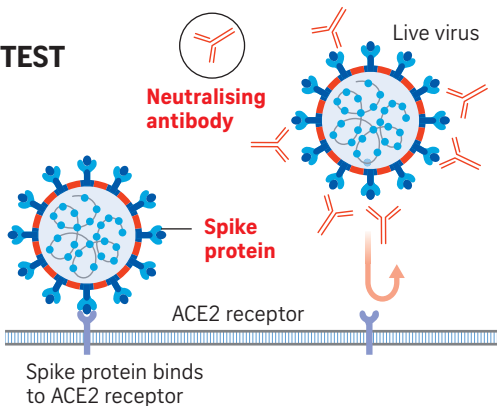


Current versus new test

Sars-CoV-2, the coronavirus which causes Covid-19, infects people by binding the proteins on its shell – known as **spike proteins** – to a cell surface protein called the ACE2 receptor. **Neutralising antibodies bind to the spike proteins**, preventing the virus from binding with the receptor.

CURRENT SEROLOGY TEST

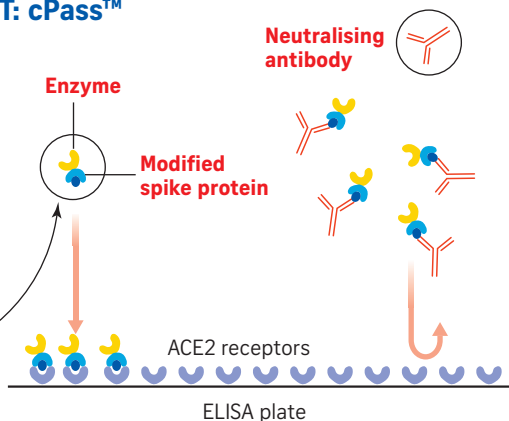
- Conventional tests which detect **neutralising antibodies** require the use of the live virus, which requires expertise and specialised equipment and a biocontainment facility to handle.



NEW SEROLOGY TEST: cPass™

- Duke-NUS' test removes the need for a live virus by mimicking key parts of the process chemically. Instead of a human cell, the ACE2 receptors are spread on an ELISA plate.

- The key part of the virus' spike protein is modified by pairing it with an enzyme that causes the mixture to change colour when it binds with the ACE2 receptors.



- If neutralising antibodies are present, they will prevent the **modified spike protein** – and the **enzyme** – from binding with the receptors, and there will be reduced or no colour change.