

The SARS-CoV-2 virus

Alt-text Figure 3 - A schematic illustration of the SARS-CoV-2 viral particle in the centre

SARS-CoV-2 genome and proteins. A spheric viral particle is in the centre of the image. A surrounding arc indicates the viral genome organisation: Open reading frame (ORF) and genes of the non-structural proteins 1 to 16 in shades of blue. In shades of green: structural genes Spike, Envelope, Membrane, and Nucleocapsid. Surrounding the arc there are illustrations of 3-dimensional structures of non-structural and structural viral proteins corresponding to the genes.

Alt-text Figure 4 - The SARS-CoV-2 replication and pathogenesis

Diagram showing the replication cycle of SARs-CoV-2. The viral particle binds with the ACE2 receptor and allows the viral genome to enter the cell. TMPRSS2 proteases translate the RNA into proteins forming the structure of new viral particles as well as ssRNA which facilitates replication of the viral genome. Fully assembled viral particles are released from the cell and may infect nearby cells or enter the bloodstream and head to secondary organs such as the brain, heart, liver, spleen, colon and kidneys