

## nsps and Accessory Proteins

Besides the important structural proteins, the SARS-CoV-2 genome contains 15 nsps, nsp1 to nsp10 and nsp12 to nsp16, and 8 accessory proteins (3a, 3b, 6, 7a, 7b, 8, 8b, 9b, and ORF14) (16). All these proteins play a specific role in viral replication (27). Unlike the accessory proteins of SARS-CoV, SARS-CoV-2 does not contain 8a protein and has a longer 8b and shorter 3b protein (16). The nsp7, nsp13, envelope, matrix, and p6 and 8b accessory proteins have not been detected with any amino acid substitutions compared to the sequences of other coronaviruses (16).

The virus structure of SARS-CoV-2 is depicted in [Fig. 2](#).