

**Asan Easy Test COVID-19 Ag on V.O.C (Variants of Concern)**

January 17, 2022

To Whom It May Concern,

Regarding the latest XBB.1, XBB, and XBB.1.5 sub-variants of SARS-CoV-2 Omicron, Asan Pharmaceutical Co., Ltd. expresses the following evaluations:

1. XBB.1, XBB, and XBB.1.5 sub-variants, as it is shown on the previous sub-variants of Omicron, have mutations in the Spike protein (S-protein), which is on the surface of the coronavirus. Specifically, it has three mutations which alter a region of the Spike protein called the furin cleavage site, known to help the Spike protein attach more effectively to cells.
2. The Spike protein is the chief target of antibodies that the immune system produces to fight a Covid-19 infection. So many mutations in this region raised concerns that variants or sub-variants' spike might be able to evade antibodies produced by either a previous infection or a vaccine. Furthermore, some monoclonal antibody treatments might not work against Omicron either because the variant's Spike protein is protected from them.
3. However, the diagnostic target of the Asan Easy Test COVID-19 Ag is Nucleocapsid protein (N-protein), and not the Spike protein where mutations occur.
4. Therefore, unless mutations occur with the nucleocapsid protein to the degree that it changes protein structures, Asan Easy Test COVID-19 Ag should be able to detect the XBB.1, XBB, and XBB.1.5 sub-variants as far as the specimen collection procedures are properly performed according to the instructions.

Sincerely Yours,



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Jeong Gyu, Yeom

Chief Executive Officer

