

Guipry, France, November the 30th, 2021

Object: Statement regarding the ability of NG Biotech products “NG-Test®/SARS-CoV-2 Ag” and “Ninonasal®” to detect the new “Omicron” SARS-CoV-2 variant.

A new SARS-CoV-2 variant was first detected in South Africa in November 2021 and classified as “Variant of Concern” in the 26th of November by the World Health Organization (WHO). This new variant named “Omicron” belongs to lineage B.1.1.529. It has already spread around the world with cases detected in many different countries. Due to numerous mutations on key parts of the Spike protein, “Omicron” is suspected to show higher infectiousness and might escape partially or totally from acquired or prophylactic immunity. Considering this new threat, NG Biotech scientists performed *in silico* analysis to make a statement on NG Biotech COVID-19 antigenic products ability to detect this new variant.

NG Biotech COVID-19 antigenic products detect the nucleocapsid protein of SARS-CoV-2, using highly specific monoclonal antibodies. According to available information, “Omicron” variant carries the following mutations on the nucleocapsid protein:

- P13L
- R203K
- G204R
- Deletion from aa31 to aa33

The 3 substitutions are shared partially or fully by other variants listed by the WHO (Alpha, Gamma, Delta, Lambda & Kappa). NG Biotech already performed *in vitro* experiments to conclude that the corresponding products can detect those mutated variants (see report P050-

35-V06). However, the deletion from aa 31 to 33 was not tested. This covers only 0.7% of the total nucleocapsid amino acid sequence and consequently represents minor risk of escaping the monoclonal antibodies used in the products.

Therefore, based on this study, we concluded that NG Biotech COVID-19 antigenic products should detect “Omicron” variant with a probability > 99%. Nonetheless, experiments will be performed once the biological material becomes available in the coming weeks to conclude definitely.

Arnaud Chalin PhD

R&D Deputy Director

R&D department – NG Biotech

November the 30th, 2021



Bibliography:

<https://www.who.int/en/activities/tracking-SARS-CoV-2-variants/>

<https://covariants.org/variants/21K.Omicron>

<https://outbreak.info/situation-reports?pango=B.1.1.529>