



respiraSC2 multi gene real time RT-PCR kit (gerbion cat No. G01133)

UPDATE 2022/01/25

Influence of mutations in the SARS-CoV-2 Spike protein gene on the detection:

In silico analysis by gerbion, analyzing the following spike protein gene mutations was performed on the available sequences in the global databases of gene bank (NCBI) and GISAID (EpiCov™).

The screened variants include the Variants of Concern / Variants of Interest / Variants under Monitoring:

- VOC: B.1.1.7 [**Alpha**]*, B.1.351 [**Beta**], P.1/B.1.1.28 [**Gamma**], B.1.617.2 [**Delta**] (all AY Subvariants),
B.1.1.529 [**Omicron**]** (Subvariants BA.1, BA.2, BA.3)
- VOI: B.1.429 [**Epsilon**]*, B.1.427 [**Epsilon**]*, P.2 [**Zeta**]*, B.1.525 [**Eta**]*, P.3 [**Theta**]*, B.1.526 [**Iota**]*, B.1.617.1 [**Kappa**]*,
C.37 [**Lambda**], B.1.621 [**Mu**], AY.4.2 [Subvariant **Delta**]
- VUM: B.1.640.1, B.1.640.2

*De-escalated variants by at least one of the following criteria: (1) the variant is no longer circulating, (2) the variant has been circulating for a long time without any impact on the overall epidemiological situation, (3) scientific evidence demonstrates that the variant is not associated with any concerning properties. (ecdc.europa.eu/en/covid-19/variants-concern)

**The Omicron variant of SARS-CoV-2 affects the S gene detection of the respiraSC2 multi gene real time RT-PCR. In case of Omicron, the RdRP and the E gene will be detected, while the S gene might show no amplification curve. This can be used to discriminate the Omicron variant from other circulating variants.

None of the mutations in any of the listed variants shows an impact on the sensitivity and specificity of the respiraSC2 multi gene real time RT-PCR.

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