

Technical Brief

April 5, 2021

**Emerging SARS-CoV-2 Variants
and Detection by the Lucira COVID-19 All-In-One Test Kit**

The Centers for Disease Control and Prevention (CDC) have highlighted the emergence of five notable SARS-CoV-2 variants of concern¹:

- (1) B.1.1.7 (also known as 20B/501Y.V1 or Variant of Concern (VOC) 202012/01) first detected in UK,
- (2) B.1.351 (also known as 20C/501Y.V2) first detected in South Africa,
- (3) P.1 (20J/501Y.V3) first detected in Japan/Brazil,
- (4) B.1.427 (also known as CAL.20C) first detected in US/California,
- (5) B.1.429 (also known as CAL.20C) first detected in US/California,

Additionally, a novel double mutant strain has been reported²:

- (6) Spike double mutant L452R, E484Q detected to date in India and US/California

Lucira Health performs routine surveillance of emerging SARS-CoV-2 strains by periodically evaluating *in silico* reactivity against sequence databases. These evaluations have shown that these six variants are reactive to the Lucira COVID-19 All-In-One Test Kit. The Lucira Health assay targets two non-overlapping regions of the N gene. Hence the detection region is unaffected by the mutations in the spike protein of SARS-CoV-2 in the emerging variant strains. As these particular viral strains become commercially available, Lucira Health intends to perform testing to confirm detection of these strains.

Lucira Health will continue to monitor the situation with emerging variants of SARS-CoV-2.

If you have any questions on the above, please reach out to Technical Support at techsupport@lucirahealth.com.

¹<https://www.cdc.gov/coronavirus/2019-ncov/cases-updates/variant-surveillance/variant-info.html>

²<https://www.sfchronicle.com/local/article/Double-mutant-coronavirus-variant-surfaces-16076361.php>