



## SARS-CoV-2 L452R Mutation Detection Kit

**RUO**

Qualitative PCR-based detection of the SARS-CoV-2 L452R Mutation

### Product Description

**DIAGNOVITAL® SARS-CoV-2 L452R Mutation Detection Kit** is a real-time RT-PCR-based test for the identification of the SARS-CoV-2 L452R mutation in respiratory specimens. **This kit is designed to run only samples that have previously proven to be SARS-CoV-2 positive.** The **DIAGNOVITAL® SARS-CoV-2 L452R Mutation Detection Kit** detects L452R mutation in **extracted SARS-CoV-2 RNA** from nasopharyngeal and oropharyngeal swab samples during infection.

## Knowing matters

The L452R mutation enhances ACE-2 receptor binding by the virus and interferes with the action of existing antibodies on the mutated S-protein. Additionally, L452R mutation is postulated to provide resistance to T-cells. L452R mutation contributes to escape from HLA-A24 mediated cellular immunity and increased binding affinity to ACE2 and viral infectivity. The mutant SARS-CoV-2 L452R has Leucine-452 positioned in the receptor-binding motif of RBD, which is involved in the interface of direct contact with the ACE2 receptor. Its replacement with Arginine is predicted to result in a much stronger binding to the receptor which is involved in escape from neutralizing antibodies.

Citation:  
Escape from neutralizing antibodies by SARS-CoV-2 spike protein variants - PubMed (nih.gov)

## Features

- Single mutation assay
- Identifies spike protein mutation- L452R
- Qualitative RT-PCR method using TaqMan probe technology
- Human endogenous control (HEC): RNase P (Ribonuclease P)
- Three different fluorophores are detected in 3 different channels
  - **FAM™** for the wild type allele
  - **HEX/VIC** for the L452R allele
  - **Cy5** for RNase P (HEC)
- Ready to use PCR Master mix, positive and nuclease-free dH<sub>2</sub>O controls
- RNA isolation required
- Cycling run time of 75 minutes
- Cycling temperature of 57°C

## Benefits

- All Diagnovital Mutation Detection kits follow a similar procedure making implementation easy in the lab
- Excellent correlation with gold standard sequencing method
- Easy to use with pre-mixed reaction reagents and easy interpretation
- Reflex testing performed using isolated nucleic acid obtained from routine SARS-CoV-2 diagnostic test
- No disruption of routine lab operations for SARS-CoV-2 testing

<b>Recommended Samples</b>	Isolated RNA from Oropharyngeal and Nasopharyngeal Swabs
<b>Extraction Systems</b>	QIAamp® MinElute Virus Spin Kit / RTA Viral NA Isolation Kit from Swabs / Tianlong Generotex 96
<b>Real-Time Instrument</b>	Applied Biosystems™ QuantStudio5 Dx Real-Time PCR System Biorad CFX96 Real-Time PCR System
<b>Storage conditions</b>	Store all components at -15°C / -25°C Avoid more than 3 freeze /Thaw cycles

## Ordering Information

Product Name	DIAGNOVITAL SARS-CoV-2 L452R Mutation Detection Kit
Number Reactions/Kit	50
A1 Life Sciences Catalog Number	090R06050

### A1 Life Sciences Head Office

Address	Maslak, Beybi Giz Plaza Meydan Sok. No:1 Kat:14 D:52, 34398, Maslak-Sarıyer/ Istanbul, Turkey
Call	+90 549 718 95 96
E-Mail	info@allifesciences.com.tr
Web	http://www.allifesciences.com.tr

For Research Use Only. Not for use in diagnostic procedures.