

DIAGNOVITAL



SARS-CoV-2 K417T Mutation Detection Kit

RUO

Qualitative PCR-based detection of the
SARS-CoV-2 K417T Mutation

Product Description

DIAGNOVITAL® SARS-CoV-2 K417T Mutation Detection Kit is a real-time RT-PCR-based test for the identification of the SARS-CoV-2 K417T 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 K417T Mutation Detection Kit** detects K417T mutation in extracted **SARS-CoV-2 RNA** from nasopharyngeal and oropharyngeal swab samples during infection.

Knowing matters

The interaction between the SARS-CoV-2 Spike protein receptor binding domain (RBD) and the ACE2 cell surface protein is required for viral infection of cells. The B.1.1.7 lineage has a mutation (N501Y) in its Spike RBD that enhances binding to ACE2. Other individual RBD mutations and combinations found in SARS-CoV-2, including Alpha (B.1.1.7), Beta (B.1.351) and Gamma (P1) variants, mainly have mutations that increase the affinity of the RBD/ACE2 interaction. Mutations K417N/T are an exception, with decreased affinity and a likely mechanism that facilitates immune escape.

The K417T mutation may be used by researchers and epidemiologists in the identification of variants Gamma versus Beta and Mu.

Citation:

<https://pubmed.ncbi.nlm.nih.gov/34435953/>
<https://covariants.org/variants>

Features

- Single mutation assay
- Identifies spike protein mutation- K417T
- 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 K417T allele
 - **Cy5** for RNase P (HEC)
- Ready to use PCR Master mix, positive and nuclease-free dH₂O 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

SPECIFICATIONS

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

Ordering Information

Product Name	DIAGNOVITAL SARS-CoV-2 K417T Mutation Detection Kit
Number Reactions/Kit	50
A1 Life Sciences Catalog Number	090R15050

A1 Life Sciences Head Office

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