



**Dr Siti Salwa Mohd Nazri**  
KPJ Ampang Puteri Specialist Hospital  
No: 1, Jalan Mamanda 9, Taman Dato Ahmad Razali  
Ampang  
Ampang Selangor DE



**Patient Name : MIOR DANIEL IBRAHIM BIN MIOR MOHD ADIB**



Ward / Clinic : ACCIDENT & EMERGENCY DEPARTMENT	Lab No. : 0222616884
Age : 3Y	Sex : Male
IC No. : 180524-10-0813	Date Received : 14/02/2022 11:58
MRN : 593304	Date Reported : 15/02/2022 07:11
DOB : 24/05/2018	Report Status : Final

Result Unit Reference range

**PCR for COVID-19 / SARS-CoV-2 DETECTION**

Sample type	Nasopharyngeal and Oropharyngeal Swab
** Sarbecovirus Envelope, E gene	<b>Detected</b> (ct value:20.54)
** COVID-19 Nucleocapsid, N gene	<b>Detected</b> (ct value:21.38)
** COVID-19 RdRp gene & S gene	<b>Detected</b> (ct value:21.55)
** COVID-19 S gene mutations	<b>Detected</b> (ct value:20.95)
** COVID-19/SARS-CoV-2 RNA	<b>Detected</b>

*Probable Omicron variant detected.*

*Note:*

*Covid-19 rRT-PCR assay unable to differentiate between viable and non-viable virus.*

*Please correlate clinically.*

**Methodology:**

By Seegene Allplex SARS-CoV-2 Master Assay

This multiplex real-time RT-PCR assay simultaneously detects four wild-type SARS-CoV-2 genes (E gene, RdRP gene, N gene, and S gene) and five notable S-gene mutations: HV69/70 deletion, Y144 deletion, E484K, N501Y, and P681H.

A false negative result may occur if a specimen is improperly collected, transported, handled, inadequate material in quality or volume, the presence of interfering substances or PCR-inhibitor in the sample, and sampling & testing being carried out outside the diagnostic window. A single negative COVID-19 test (especially if from upper respiratory tract specimen) does not exclude COVID-19 infection. The rate of PCR positivity in different biological sources collected from patients with COVID-19 are as follows: BAL >90%, sputum 70-80%, nasopharyngeal & oropharyngeal swabs 70-80%, nasal swab 40-70%, and pharyngeal swab 30-50%. If there is a strong clinical, radiological, and/or epidemiological suspicion of COVID-19 infection, the submission of a new specimen is highly recommended.

Positive result indicates active SARS-CoV-2 infection, or the detection of non-viable/ dead fragments of SARS-CoV-2 specific genes, but does not rule out other viruses and/or bacterial co-infection. The positive result should be interpreted in correlation with clinical history, signs and symptoms, epidemiologic evidence and other relevant diagnostic information.

References:

1. World Health Organization. Novel Coronavirus (2019-nCoV) technical guidance. <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/technical-guidance> (Accessed on January 04, 2022).
2. Corman V, Bleicker T, Brünink S, Drosten C, Landt O, Koopmans M, et al. Diagnostic detection of Wuhan coronavirus 2019 by real-time RTPCR 2020 [17 January 2020]. Available from: <<https://www.who.int/docs/default-source/coronaviruse/wuhan-virus-assay-v1991527e5122341d99287a1b17c111902.pdf>>
3. G. Lippi et al. Vulnerabilities in the diagnosis of COVID-19. Clin Chem Lab Med 2020 58(7):1070-1076.
4. US Food and Drug Administration (US FDA). SARS-CoV-2 Viral Mutations: Impact on COVID-19 Tests. 2021. <https://www.fda.gov/medical-devices/coronavirus-covid-19-and-medical-devices/sars-cov-2-viral-mutations-impact-covid-19-tests>

*Validated by Dr. Muhammad Nazri Aziz (Medical Microbiologist) on 15/02/2022 7:11:45 AM*



**Dr Siti Salwa Mohd Nazri**

KPJ Ampang Puteri Specialist Hospital  
No: 1, Jalan Mamanda 9, Taman Dato Ahmad Razali  
Ampang  
Ampang Selangor DE



**Patient Name : MIOR DANIEL IBRAHIM BIN MIOR MOHD ADIB**



Ward / Clinic : ACCIDENT & EMERGENCY DEPARTMENT

**Lab No. : 0222616884**

Age : 3Y

Sex : Male

Date Received : 14/02/2022 11:58

IC No. : 180524-10-0813

MRN : 593304

Date Reported : 15/02/2022 07:11

DOB : 24/05/2018

Report Status : Final

Result

Unit

Reference range

*Consultant Pathologist:-*

*Dr. Muhammad Nazri Bin Aziz; MD (USM), MPath. Med. Microbiology (UKM), Consultant Medical Microbiologist*