

# RADI COVID-19 Detection Kit

REF:RV008



**FAST RESULT, EASY TO USE and COMPACT !**

**Get the result within 80 min for all suspected cases for 2019 novel coronavirus!**

## Introduction

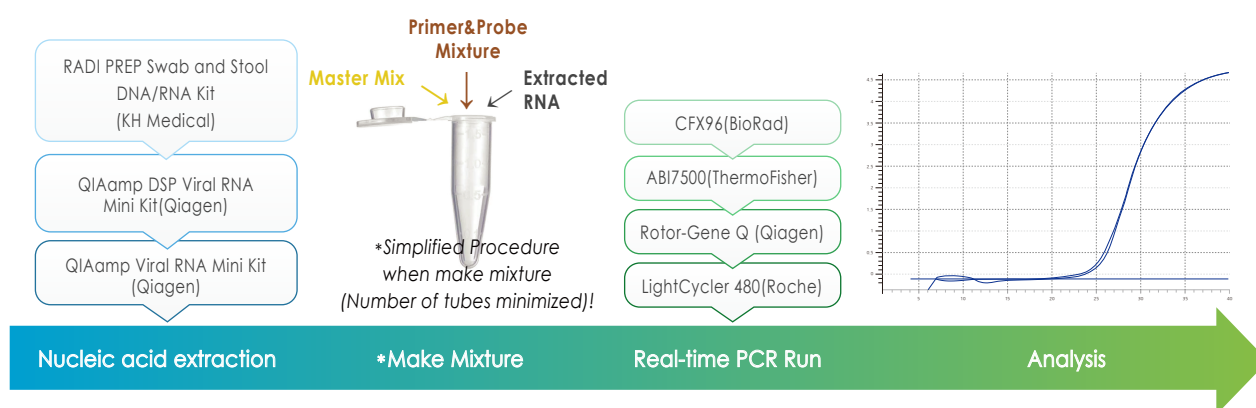
RADI COVID-19 Detection Kit is used for qualitative detection of 2019 novel coronavirus in human Nasal Swab or Sputum by using ABI 7500, Bio-Rad CFX 96 Platform, etc.

## Product Specification



RADI COVID-19 Detection Kit	
Intended use	Qualitative detection of COVID-19
Specimen type	RNA extracted in nasal swab or Sputum
Target	RdRP, S
Product contents	<ul style="list-style-type: none"><li>◆ 3X RT MasterMix (Yellow)</li><li>◆ COVID-19 Primer &amp; Probe Mixture (Brown)</li><li>◆ COVID-19 positive control (Red)</li><li>◆ RNase free water (Blue)</li></ul>
LoD	0.66 copies/ $\mu$ l
Storage condition	-25°C ~ -15°C

## Test Procedure



## Ordering Information

KHMedical Ref	Product Name	Shelf Life	A.Menarini Ref
RV008	RADI COVID-19 Detection Kit	6 months	51586
MP002	RADI PREP Swab and Stool DNA/RNA Kit	18 months	51608
MPA004	Carrier Molecule	18 months	51607

"Intended for specialists only".

# Performance of RADl COVID-19 Detection Kit

## Analytical Sensitivity (Limit of Detection)

To test the Sensitivity and Limit of Detection (LoD) of RADl COVID-19 Detection Kit, synthesized RNA by in vitro transcription was diluted to 4 concentrations and ran 24 times for each.

LoD is 0.66 copies/ $\mu$ l

Target	Copies/ $\mu$ l	Mean Ct	Result in agreement	Percent agreement
S gene	1.66	37.62	24/24	100%
	<b>0.66</b>	<b>39.88</b>	<b>23/24</b>	<b>95.83%</b>
	0.5	40.18	24/24	100%
	0.33	39.57	20/24	83.32%

Target	Copies/ $\mu$ l	Mean Ct	Result in agreement	Percent agreement
RdRP gene	1.66	36.55	24/24	100%
	<b>0.66</b>	<b>38.06</b>	<b>23/24</b>	<b>95.83%</b>
	0.5	39.08	22/24	91.66%
	0.33	38.47	21/24	87.49%

\*IPC mean Ct : 22.93

## Cross Reactivity

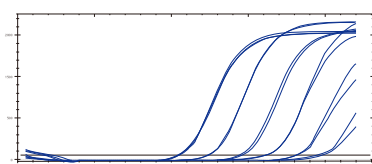
RADl COVID-19 Detection KIT did not cross-react with any of 53 pathogens.

## Comparative Evaluation by using WHO published Primer & Probe

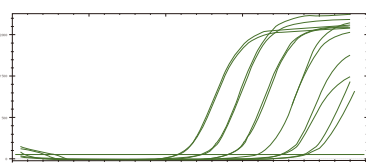
RADl COVID-19 Detection Kit's Primer & Probe design could detect up to 10 copies/rxn compared to WHO Primer & Probe which detect up to  $10^2$  copies/rxn for E gene and  $10^3$  copies/rxn for RdRP gene.

Copies / rxn	RADl COVID-19 Detection KIT				WHO primer & probe			
	S gene		RdRP gene		E gene		RdRP gene	
$10^6$	21.06	21.2	21.46	21.63	23.24	22.72	24.75	24.78
$10^5$	25.05	24.97	25.01	24.65	26.48	26.34	28.17	28.12
$10^4$	28.99	29.22	28.22	28.29	29.90	29.88	31.44	31.31
$10^3$	32.47	32.62	31.96	31.81	32.48	32.26	34.61	33.72
$10^2$	36.51	36.41	35.4	35.18	35.69	36.76	N/A	N/A
10	39.95	39.66	39.18	38.05	N/A	N/A	N/A	N/A

RADl COVID-19 Detection KIT

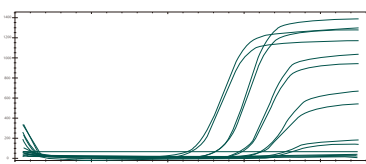


S gene

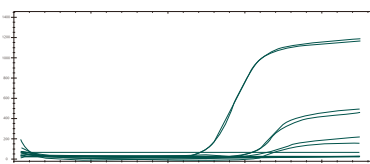


RdRP gene

WHO primer & probe



E gene



RdRP gene



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