

## COVID-19 Serology Testing Guidelines

	IgG	IgM, IgA, IgG (Total)
Inpatient	<b>Clinical use case and when to order this test:</b> Patient with symptoms of COVID-19 for more than 8 days, and two negative SARS-COV-2 PCR tests.	<b>Clinical use case and when to order this test:</b> Patient with symptoms of COVID-19 for more than 8 days, and two negative SARS-COV-2 PCR tests.
	<b>Interpreting the result:</b> <ul style="list-style-type: none"> <li>Reported clinical sensitivity of 54%* at 8-14 days after symptom onset, and 79%* at 15-39 days after symptom onset, meaning a negative result in the first month does not rule out infection.</li> <li>Specificity reported as 99.6%* from the manufacturer; consider a positive test evidence of infection and order COVID precautions <u>if still having symptoms</u>.</li> </ul>	<b>Interpreting the result:</b> <ul style="list-style-type: none"> <li>Reported clinical sensitivity 38%* 1-7 Days, 89%* 8-14 Days and 100%* 15-39 days per the literature so negative result prior to 14 days does not rule out infection</li> <li>Negative result after 21 days of symptoms essentially rules out infection</li> <li>Specificity 99.8%* consider positive test result evidence of infection and order COVID precautions <u>if still having symptoms</u>.</li> </ul>
Outpatient	<b>Clinical use case and when to order this test:</b> Patient with symptoms of COVID-19 for more than 8 days, in addition to or when unable to obtain COVID PCR Testing.	<b>Clinical use case and when to order this test:</b> Patient with symptoms of COVID-19 for more than 8 days, in addition to or when unable to obtain COVID PCR Testing
	<b>Interpreting the result:</b> <ul style="list-style-type: none"> <li>Reported clinical sensitivity of 54%* at 8-14 days after symptom onset, and 79%* at 15-39 days after symptom onset, meaning a negative result in the first month does not rule out infection.</li> <li>Specificity reported as 99.6%* from the manufacturer; consider a positive test evidence of infection and order COVID precautions <u>if still having symptoms</u>.</li> </ul>	<b>Interpreting the result:</b> <ul style="list-style-type: none"> <li>Reported clinical sensitivity 38%* 1-7 Days, 89%* 8-14 Days and 100%* 15-39 days per the literature so negative result prior to 14 days does not rule out infection</li> <li>Negative result after 21 days of symptoms essentially rules out infection</li> <li>Specificity 99.8%* consider positive test result evidence of infection and order COVID precautions <u>if still having symptoms</u>.</li> </ul>

## Serology Sensitivity as Reported by the Chinese Experience

(\*referenced in dashboard guidelines)

*	Day 1 – 7	Day 8 – 14	Day 15 – 39
RNA	66.7	54.0	45.5
Total Ab	38.3	89.6	100.0
IgM	28.7	73.3	94.3
IgG	19.1	54.1	79.9
RNA + Ab	78.7	97.0	100.0

\*From Zhao, J, *et al.* Antibody responses to SARS-CoV-2 in patients of novel coronavirus disease 2019 medRxiv preprint doi:<https://doi.org/10.1101/2020.03.02.20030189>

## Serology Specificity and Sensitivity as Reported by the Manufacturer

(\*referenced in dashboard Guidelines)

Platform Antibody	Specificity	Sensitivity (<3 days)	Sensitivity (3-7 Days)	Sensitivity (8-13 Days)	Sensitivity ( ≥ 14 Days)
<b>Abbott IgG</b>	99.63%	0.00%	25.00%	86.36%	100.00%

Platform Antibody	Specificity	Sensitivity (0-6 Days)	Sensitivity (7 -13 Days)	Sensitivity ( ≥ 14 Days)
<b>Roche IgM / IgA / IgG (total)</b>	99.81%	65.5%	88.1%	100%

Platform Antibody	Specificity	Sensitivity (0-6 Days)	Sensitivity (7 -13 Days)	Sensitivity ( ≥ 14 Days)
<b>Siemens Centaur IgM / IgA / IgG (total)</b>	99.81%	61.05%	97.50%	100%