



SARS-CoV-2 IgG (sCOVG)

For Use Under Emergency Use Authorization Only

For in vitro diagnostic use.

For prescription use only.

The results of this semi-quantitative test should not be interpreted as an indication or degree of immunity or protection from reinfection.

Assay for the Detection of IgG Antibodies to SARS-CoV-2

Current Revision and Date ^a	Rev. 04, 2022-01	
Product Name	Atellica IM SARS-CoV-2 IgG (sCOVG)	(100 tests)
		(500 tests)
Abbreviated Product Name	Atellica IM sCOVG	
Test Name/ID	sCOVG	
Systems	Atellica IM Analyzer	
Materials Required but Not Provided	Atellica IM sCOVG QC	REF 11207388
	Atellica IM APW1	REF 10995458
Optional Materials	Atellica IM sCOVG DIL	REF 11208299 (2-pack)
	Atellica IM sCOVG MCM	REF 11207587
Specimen Types	Serum, lithium heparin plasma	
Sample Volume	40 μL	
Measuring Interval	0.50-150.00 Index	

^a A vertical bar in the page margin indicates technical content that differs from the previous version.

Intended Use

The Atellica® IM SARS-CoV-2 IgG (sCOVG) assay is a chemiluminescent immunoassay intended for qualitative and semi-quantitative detection of IgG antibodies to SARS-CoV-2 in human serum and plasma (lithium heparin) using the using the Atellica® IM Analyzer. The Atellica IM SARS-CoV-2 IgG (sCOVG) assay is intended for use as an aid in identifying individuals with an adaptive immune response to SARS-CoV-2, indicating recent or prior infection. At this time, it is unknown for how long antibodies persist following infection and if the presence of antibodies confers protective immunity. The Atellica IM SARS-CoV-2 IgG (sCOVG) assay should not be used to diagnose or exclude acute SARS-CoV-2 infection. Testing is limited to laboratories certified under the Clinical Laboratory Improvement Amendments of 1988 (CLIA), 42 U.S.C 263a, that meet requirements to perform moderate or high complexity tests.

Results are for the detection of SARS-CoV-2 IgG antibodies. IgG antibodies to SARS-CoV-2 are generally detectable in blood several days after initial infection, although the duration of time antibodies are present post-infection is not well characterized. Individuals may have detectable virus present for several weeks following seroconversion.

Laboratories within the United States and its territories are required to report all results to the appropriate public health authorities.

The sensitivity of the Atellica IM SARS-CoV-2 IgG (sCOVG) assay early after infection is unknown. Negative results do not preclude acute SARS-CoV-2 infection. If acute infection is suspected, direct testing for SARS-CoV-2 is necessary.

False positive results for the Atellica IM SARS-CoV-2 IgG (sCOVG) assay may occur due to cross-reactivity from pre-existing antibodies or other possible causes.

Samples should only be tested from individuals who are 15 days or more post symptom onset.

The Atellica IM SARS-CoV-2 IgG (sCOVG) assay is only for use under the Food and Drug Administration's Emergency Use Authorization.

Summary and Explanation

COVID-19 (coronavirus disease 2019) is the illness resulting from infection with SARS-CoV-2 (severe acute respiratory syndrome coronavirus 2) virus.¹⁻⁵ The virus spreads readily from person to person or possibly from environmental exposure.⁶ Evidence supports spread by both asymptomatic and symptomatic individuals.⁷

Antibodies appear approximately 1-3 weeks post-symptom onset in most patients and are produced in both symptomatic and asymptomatic infection.^{8,9} Unlike typical seroconversion profiles, near-simultaneous production of both IgM and IgG has been observed in symptomatic patients with confirmed SARS-CoV-2. Titer of antibody may be higher in symptomatic disease, though additional data is needed to confirm this.^{10,11}

Antibodies produced to structural proteins of the virus include spike antibody and nucleocapsid antibody. Data show both IgM and IgG antibodies for these structural proteins appear with seroconversion. IgM eventually disappears, but IgG remains detectable in most patients. Spike is a transmembrane glycoprotein comprised of two regions: S1 and S2. S1 mediates recognition and binding of the viral receptor (ACE2) on host cells, and S2 facilitates viral fusion and entry. The majority of S1 is comprised of the receptor binding domain (RBD) that binds directly to ACE2 and is highly immunogenic. The S1 RBD in SARS-CoV-2 contains both unique and conserved sequences compared to other beta-coronaviruses.

Principles of the Procedure

The Atellica IM sCOVG assay is a fully automated 2-step sandwich immunoassay using indirect chemiluminescent technology. The patient specimen is diluted with Atellica IM sCOVG DIL and incubated with the Solid Phase Reagent. The Solid Phase contains a preformed complex of streptavidin-coated microparticles and biotinylated SARS-CoV-2 recombinant antigens. The antigen-coated particles subsequently capture SARS-CoV-2 specific antibodies in the specimen. The antibody-antigen complex is washed and Lite Reagent is added. The Lite Reagent consists of an acridinium-ester-labeled anti-human IgG mouse monoclonal antibody. The entire complex is washed and the signal is generated in the presence of Lite Reagent bound to the Solid Phase via the anti-SARS-CoV-2 IgG:SARS-CoV-2 antigen complex.

A direct relationship exists between the amount of SARS-CoV-2 IgG antibody present in the patient sample and the amount of relative light units (RLUs) detected by the system.

A result of reactive or nonreactive is determined according to the Index Value established with the calibrators. Refer to *Interpretation of Results*.

Reagents

Material Description	Storage	Stability
Atellica IM sCOVG ReadyPack® primary reagent pack ^{a, b}	Unopened at 2–8°C	Until expiration date on product
Lite Reagent 10.0 mL/reagent pack Mouse monoclonal anti-human IgG antibody labeled with acridinium ester (~0.05 µg/mL); buffer; surfactant; bovine serum albumin (BSA); sodium azide (< 0.1%); preservative Solid Phase 10.0 mL/reagent pack Streptavidin-coated paramagnetic microparticles preformed with biotinylated SARS-CoV-2 S1 RBD antigen (~1.0 µg/mL); buffer; bovine serum albumin; horse serum; surfactant; preservative Ancillary Well Reagent 10.0 mL/reagent pack Buffer; surfactant; bovine serum albumin; horse serum; preservative	Onboard	28 days
Atellica IM sCOVG DIL ReadyPack ancillary reagent pack ^{a, b, c}	Unopened at 2–8°C	Until expiration date on product
25.0 mL/reagent pack Potassium thiocyanate (~0.55 M); surfactant; sodium caseinate; BSA; preservatives	Onboard	28 days
Atellica IM sCOVG CAL ^{a, b} sCOVG CAL L:	Unopened at 2–8°C	Until expiration date on product
1.0 mL/vial Processed* human plasma nonreactive for SARS-CoV-2	Opened at 2–8°C	60 days
antibodies; sodium azide (< 0.1%) *Processed plasma is defibrinated and filtered plasma. sCOVG CAL H: 1.0 mL/vial Horse serum spiked with human monoclonal IgG antibodies to SARS-CoV-2; sodium azide (< 0.1%)	At room temperature	8 hours

Material Description	Storage	Stability
Atellica IM APW1 ReadyPack ancillary reagent pack ^{a, d}	Unopened at 2–8°C	Until expiration date on product
25.0 mL/pack 0.4 N sodium hydroxide	Onboard	14 days

- Store in an upright position.
- b Prevent exposure to sunlight and heat.
- ^c The diluent provided in this kit is also available as an optional material if additional diluent is needed. Refer to *Optional Materials*.
- d Refer to Materials Required but Not Provided.

Warnings and Precautions

For Use Under Emergency Use Authorization Only

For in vitro diagnostic use only.

For prescription use only.

This product has not been FDA cleared or approved, but has been authorized for emergency use by FDA under an EUA for use by authorized laboratories.

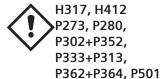
This product has been authorized only for detecting the presence of IgG antibodies to SARS-CoV-2, not for any other viruses or pathogens.

The emergency use of this product is only authorized for the duration of the declaration that circumstances exist justifying the authorization of emergency use of *in vitro* diagnostics for detection and/or diagnosis of COVID-19 under Section 564(b)(1) of the Federal Food, Drug and Cosmetic Act, 21 U.S.C. § 360bbb-3(b)(1), unless the declaration is terminated or authorization is revoked sooner.

CAUTION

Federal (USA) law restricts this device to sale by or on the order of a licensed healthcare professional.

Safety data sheets (SDS) available on siemens-healthineers.com.

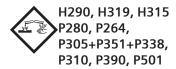


Warning!

May cause an allergic skin reaction. Harmful to aquatic life with long lasting effects.

Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection. IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/ attention. Take off contaminated clothing and wash it before reuse. Dispose of contents and container in accordance with all local, regional, and national regulations.

Contains: reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1) (in Atellica IM sCOVG DIL)



Warning!

May be corrosive to metals. Causes serious eye irritation. Causes skin irritation.

Wear protective gloves/protective clothing/eye protection/face protection. Wash hands thoroughly after handling. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician. Absorb spillage to prevent material damage. Dispose of contents and container in accordance with all local, regional, and national regulations.

Contains: sodium hydroxide (in Atellica IM APW1)



CAUTION POTENTIAL BIOHAZARD

Contains human source material. Each donation of human blood or blood component was tested by FDA-approved methods for the presence of antibodies to human immunodeficiency virus type 1 (HIV-1) and type 2 (HIV-2), as well as for hepatitis B surface antigen (HBsAg) and antibody to hepatitis C virus (HCV). The test results were negative (not repeatedly reactive). No test offers complete assurance that these or other infectious agents are absent; this material should be handled using good laboratory practices and universal precautions.¹⁴⁻¹⁶

CAUTION

This device contains material of animal origin and should be handled as a potential carrier and transmitter of disease.

Contains sodium azide as a preservative. Sodium azide can react with copper or lead plumbing to form explosive metal azides. On disposal, flush reagents with a large volume of water to prevent buildup of azides. Disposal into drain systems must be in compliance with prevailing regulatory requirements.

Dispose of hazardous or biologically contaminated materials according to the practices of your institution. Discard all materials in a safe and acceptable manner and in compliance with prevailing regulatory requirements.

Storage and Stability

Store all reagents at $2-8^{\circ}$ C in an upright position, away from light and heat. Do not use products beyond the expiration date printed on the product labeling.

For information about product storage and stability, refer to *Reagents*.

Onboard Stability

Discard products at the end of the onboard stability interval. Do not use products beyond the expiration date printed on the product labeling.

For information about product onboard stability, refer to Reagents.

Specimen Collection and Handling

Serum and plasma (lithium heparin) are the recommended sample types for this assay. Do not use heat-inactivated specimens.

Collecting the Specimen

- Observe universal precautions when collecting specimens. Handle all specimens as if they are capable of transmitting disease. 16
- Follow recommended procedures for collection of diagnostic blood specimens by venipuncture.¹⁷

- Follow the instructions provided with your specimen collection device for use and processing.¹⁸
- Allow blood specimens to clot completely before centrifugation.¹⁵
- Keep tubes capped at all times. 15

Storing the Specimen

- Samples are stable for up to 24 hours onboard the system.
- Separated samples are stable for up to 7 days at room temperature, and for up to 14 days at $2-8^{\circ}$ C.
- Thawed frozen specimens must be clarified by centrifugation prior to testing. Do not store in a frost-free freezer. Avoid more than 4 freeze-thaw cycles.
- Freeze samples, devoid of red blood cells, at \leq -20°C for longer storage.

The handling and storage information provided here is based on data or references maintained by the manufacturer. It is the responsibility of the individual laboratory to use all available references and/or its own studies when establishing alternate stability criteria to meet specific needs.

Transporting the Specimen

Package and label specimens for shipment in compliance with applicable federal and international regulations covering the transport of clinical specimens and etiological agents.

If shipment is expected to exceed 2 days, ship specimens frozen. Store samples capped and upright at 2–8°C upon arrival.

Preparing the Samples

This assay requires 40 μ L of sample for a single determination. This volume does not include the unusable volume in the sample container or the additional volume required when performing duplicates or other tests on the same sample. For a complete list of appropriate sample containers and information about determining the minimum required volume, refer to the system online help.

The sample volume required to perform onboard dilution differs from the sample volume required to perform a single determination on an undiluted sample. Refer to *Dilutions*.

Do not use samples with apparent contamination.

Before placing samples on the system, ensure that samples are free of:

- Bubbles or foam.
- Fibrin or other particulate matter.

Remove particulates by centrifugation according to CLSI guidance and the collection device manufacturer's recommendations.¹⁵

Procedure

Materials Provided

The following materials are provided:

REF	Contents	Number of Tests
11207386	1 ReadyPack primary reagent pack containing Atellica IM sCOVG Lite Reagent, Solid Phase, and Ancillary Well Reagent 1 ReadyPack ancillary reagent pack containing Atellica IM sCOVG DIL DIL Atellica IM sCOVG master curve and test definition MC TDEF 1 vial Atellica IM sCOVG CAL low calibrator CAL L 1 vial Atellica IM sCOVG CAL high calibrator CAL H Atellica IM sCOVG CAL calibrator assigned value sheet CAL LOT VAL	100
11207387	5 ReadyPack primary reagent packs containing Atellica IM sCOVG Lite Reagent, Solid Phase, and Ancillary Well Reagent 5 ReadyPack ancillary reagent packs containing Atellica IM sCOVG DIL DIL Atellica IM sCOVG master curve and test definition MC TDEF 2 vials Atellica IM sCOVG CAL low calibrator CAL L 2 vials Atellica IM sCOVG CAL high calibrator CAL H Atellica IM sCOVG CAL calibrator assigned value sheet CAL LOT VAL	500

Materials Required but Not Provided

The following materials are required to perform this assay, but are not provided:

REF	Description	
	Atellica IM Analyzer ^a	
11207388	Atellica IM sCOVG QC (quality control material)	2 x 2.0 mL negative quality control, level 1 CONTROL - 1 2 x 2.0 mL positive quality control, level 2 CONTROL + 2 Quality control assigned value sheet CONTROL LOT VAL
10995458	Atellica IM APW1 (probe wash)	2 ReadyPack ancillary reagent packs containing 25.0 mL/pack wash

^a Additional system fluids are required to operate the system: Atellica IM Wash, Atellica IM Acid, Atellica IM Base, and Atellica IM Cleaner. For system fluid instructions for use, refer to the Document Library.

Optional Materials

The following materials may be used to perform this assay, but are not provided:

REF	Description	
11208299	Atellica IM sCOVG DIL (diluent)	2 ReadyPack ancillary reagent packs containing 25.0 mL/pack DIL
11207587	Atellica IM sCOVG MCM (master curve material)	4 x 1.0 mL levels of master curve material MCM

Assay Procedure

The system automatically performs the following steps:

- 1. Dispenses 40 μ L of sample into a cuvette.
- 2. Dispenses 160 μL of Atellica IM sCOVG DIL into the cuvette with the sample.
- 3. Removes 10 μ L of the diluted sample from the cuvette and dispenses it into a second cuvette.
- 4. Dispenses 100 μ L of Solid Phase and 100 μ L of Ancillary Well Reagent, then incubates for 12 minutes at 37°C.
- 5. Performs a wash sequence using Atellica IM Wash.
- 6. Resuspends the washed particles in 150 µL of Atellica IM Wash.
- 7. Dispenses 100 µL of Lite Reagent, then incubates for 8 minutes at 37°C.
- 8. Performs a wash sequence using Atellica IM Wash.
- 9. Dispenses 300 μ L each of Atellica IM Acid and Atellica IM Base to initiate the chemiluminescent reaction.
- 10. Reports results.

Preparing the Reagents

All reagents are liquid and ready to use. Before loading the packs onto the system, reagents require mixing. For information about mixing the reagents, refer to the system online help.

Preparing the System

Ensure that sufficient materials are loaded on the system. Refer to *Materials Provided* and *Materials Required but Not Provided* for guidance about required reagents.

For information about loading products, refer to the system online help.

Master Curve Definition

Before initiating calibration on each new lot of reagent, enter the assay master curve and test definition by scanning the MCTDEF 2D barcodes. For information about entering the master curve and test definition, refer to the system online help.

Performing Calibration

For calibration of the Atellica IM sCOVG assay, use the calibrators provided with each kit.

Note Calibrators provided in an assay kit must only be used with the reagent lot provided in the same kit.

Calibration Frequency

Perform a calibration if one or more of the following conditions exist:

- When changing lot numbers of primary reagent packs.
- At the end of the lot calibration interval, for a specified lot of calibrated reagent on the system.
- At the end of the pack calibration interval, for calibrated reagent packs on the system.
- When indicated by quality control results.
- After major maintenance or service, if indicated by quality control results.

Note When loading a new primary reagent pack, a calibration is not required if there is a valid lot calibration. For information about lot calibration and pack calibration, refer to the system online help.

Stability Interval	Days
Lot Calibration	28
Pack Calibration	14
Reagent Onboard Stability	28

Follow government regulations or accreditation requirements for calibration frequency. Individual laboratory quality control programs and procedures may require more frequent calibration.

Preparing the Calibrators

Calibrators are liquid and ready to use. Allow the calibrators to equilibrate to room temperature. Gently mix and invert the vials to ensure homogeneity of the material.

Use calibrators within the stability limits specified in *Reagents* and discard any remaining material.

Calibration Procedure

The calibrators are provided in dropper vials. Each dispensed drop is approximately 50 µL.

The required sample volume for testing depends on several factors. For information about sample volume requirements, refer to the system online help.

Use the following lot-specific materials to perform calibration:

- For the master curve and assay test definitions, refer to the lot-specific master curve and test definition sheet MCTDEF provided with the assay reagents.
- Calibrators provided in an assay kit must only be used with reagents from that assay kit lot. Do not use calibrators from one assay kit lot with reagents from a different assay kit lot.
- For the calibrator definitions, refer to the calibrator assigned value sheet CAL LOT VAL provided with the calibrator materials.
- Generate lot-specific barcode labels to use with the calibrator samples.

For instructions about how to perform the calibration procedure, refer to the system online help.

Performing Quality Control

For quality control of the Atellica IM sCOVG assay, use the Atellica IM sCOVG QC at least once during each day that samples are analyzed. Use the quality control material in accordance with the quality control instructions for use. For the assigned values, refer to the quality control value sheet CONTROL LOT VAL provided.

A satisfactory level of performance is achieved when the analyte values obtained are within the expected control interval for the system or within your interval, as determined by an appropriate internal laboratory quality control procedure. Follow your laboratory's quality control procedures if the results obtained do not fall within the acceptable limits. For information about entering quality control definitions, refer to the system online help.

Follow government regulations or accreditation requirements for quality control frequency. Individual laboratory quality control programs and procedures may require more frequent quality control testing.

Test quality control samples after a successful calibration.

Taking Corrective Action

If the quality control results do not fall within the expected control interval, do not report results. Perform corrective actions in accordance with established laboratory protocol. For suggested protocol, refer to the system online help.

Results

Calculation of Results

The system determines the result using the calculation procedure described in the system online help. Refer to *Interpretation of Results*.

For information about results outside the specified measuring interval, refer to *Analytical Measuring Interval*.

Dilutions

The analytical measuring interval is 0.50–150.00 Index. For information about dilution options, refer to the system online help.

Dilute and retest samples with values > 150.00 Index to obtain accurate results up to 3000 Index.

Note Due to the heterogeneity of SARS-CoV-2 antibodies, some patient samples may exhibit a non-linear dilution.

For automated dilutions using the Atellica IM Analyzer, perform the following activities.

- Load additional Atellica IM sCOVG DIL, if needed.
- Ensure that sufficient sample volume is available. Refer to the table below.
- Select the appropriate dilution factor.

For automatic dilutions, enter a dilution setpoint \leq 150 Index.

For additional instructions on running automatic dilutions, refer to the system online help.

Sample	Dilution	Sample Volume (μL)
Serum and plasma	1:5	40
Serum and plasma	1:10	40
Serum and plasma	1:20	40

Interpretation of Results

The system reports Atellica IM sCOVG assay results in Index Values and as Nonreactive or Reactive:

- Nonreactive (negative): < 1.00 Index. These samples are considered negative for SARS-CoV-2 IgG antibodies. Report nonreactive patient results as < 1.00 Index.
- Reactive (positive): ≥ 1.00 Index. These samples are considered positive for SARS-CoV-2 IgG antibodies. Report reactive results with the numeric Index Value within the measuring interval for semi-quantitative measurements.

Numeric results are reported for samples with values between 1.00 and 150.00 Index. Numeric results below 1.00 Index should not be reported outside of the laboratory. Results above 150.00 Index are reported as > 150.00 Index or > 3000 Index for diluted samples that exceeded the extended measuring interval.

Results of this assay should always be interpreted in conjunction with the patient's medical history, clinical presentation, and other findings.

Limitations

The following information pertains to limitations of the assay:

• Use of the Atellica IM SARS-CoV-2 IgG (sCOVG) assay is limited to laboratory personnel who have been trained. Not for home use.

- False positive results may occur due to cross-reactivity from pre-existing antibodies or other possible causes.
- This assay has not been evaluated with fingerstick specimens. This test is not authorized for use with fingerstick whole blood.
- The performance of this test has not been established in individuals who have received a
 COVID-19 vaccine. The clinical significance of a positive or negative antibody result
 following COVID-19 vaccination has not been established, and the result from this test
 should not be interpreted as an indication or degree of protection from infection after
 vaccination.
- The performance of this test was established based on the evaluation of a limited number of clinical specimens collected from the United States and Belgium prior to 2019 and between March 2020 to July 2020. Additional 50 clinical specimens were collected from the United States between November 2020 to December 2020. The clinical performance has not been established in all circulating variants, but is anticipated to be reflective of the prevalent variants in circulation at the time and location of the clinical evaluation. Performance at the time of testing may vary depending on the variants circulating, including newly emerging strains of SARS-CoV-2 and their prevalence, which change over time.
- Samples should only be tested from individuals who are 15 days or more post symptom onset.
- The clinical applicability of a quantitative or semi-quantitative result is currently unknown and results cannot be interpreted as an indication or degree of immunity or protection from reinfection, nor be compared to the results from other SARS-CoV-2 antibody assays.
- This device should not be used to diagnose or exclude acute SARS-CoV-2 infection. Direct testing for SARS-CoV-2 with a molecular assay should be performed to evaluate acute infection in symptomatic individuals.
- Performance characteristics have not been established for the assay used in conjunction with other manufacturers' assays for specific SARS-CoV-2 serological markers. Laboratories are responsible for establishing their own performance characteristics.
- The performance of the assay has not been established with cord blood, neonatal specimens, cadaver specimens, or body fluids other than serum or plasma.
- Results obtained with the assay may not be used interchangeably with values obtained with different manufacturers' test methods.
- A positive result may not indicate previous SARS-CoV-2 infection. Consider other information, including clinical history and local disease prevalence, in assessing the need for a second, but different, serology test to confirm an immune response.
- A negative result for an individual subject indicates absence of detectable anti-SARS-CoV-2 antibodies. Negative results do not preclude SARS-CoV-2 infection and should not be used as the sole basis for patient management decisions. The sensitivity of this assay early after infection is unknown.
- A negative result can occur if the quantity of the anti-SARS-CoV-2 antibodies present in the specimen is below the detection limits of the assay, or the antibodies that are detected are not present during the stage of disease in which a sample is collected.

- Performance has only been established with the specimen types listed in the *Intended Use*. Other specimen types have not been evaluated and should not be used with this assay.
- Results are not intended to be used as the sole basis for patient management decisions. Test results should be interpreted in conjunction with clinical observations, patient history, epidemiological information, and other laboratory findings.
- The immune response may be depressed in elderly, immunocompromised, or immunosuppressed patients. Immunocompromised patients who have COVID-19 may have a delayed antibody response and produce levels of antibody which may not be detected as reactive by the assay.
- It is not known at this time if the presence of antibodies to SARS-CoV-2 confers immunity to re-infection.
- This test should not be used for donor screening to prevent SARS-CoV-2 transmission during blood, tissue, or organ donations.

Conditions of Authorization for the Laboratory

The Atellica IM SARS-CoV-2 IgG (sCOVG) assay Letter of Authorization, along with the authorized Fact Sheet for Healthcare Providers, the authorized Fact Sheet for Recipients, and authorized labeling are available on the FDA website:

https://www.fda.gov/medical-devices/coronavirus-disease-2019-covid-19-emergency-use-authorizations-medical-devices/vitro-diagnostics-euas

Authorized laboratories using the Atellica IM SARS-CoV-2 IgG (sCOVG) assay must adhere to the Conditions of Authorization indicated in the Letter of Authorization as listed below:

- Authorized laboratories^a using the Atellica IM SARS-CoV-2 IgG (sCOVG) assay must include
 with test result reports, all authorized Fact Sheets. Under exigent circumstances, other
 appropriate methods for disseminating these Fact Sheets may be used, which may include
 mass media.
- Authorized laboratories using the Atellica IM SARS-CoV-2 IgG (sCOVG) assay must use the product as outlined in the authorized labeling. Deviations from the authorized procedures, including the authorized instrument, authorized clinical specimen types, authorized control materials, authorized other ancillary reagents and authorized materials required to use the Atellica IM SARS-CoV-2 IgG (sCOVG) assay are not permitted.
- Authorized laboratories that receive the Atellica IM SARS-CoV-2 IgG (sCOVG) assay must notify the relevant public health authorities of their intent to run the assay prior to initiating testing.
- Authorized laboratories using the Atellica IM SARS-CoV-2 IgG (sCOVG) assay must have a
 process in place for reporting test results to healthcare providers and relevant public
 health authorities, as appropriate.
- Authorized laboratories must collect information on the performance of the Atellica IM SARS-CoV-2 IgG (sCOVG) assay and report to DMD/OHT7-OIR/OPEQ/ CDRH (via email: CDRH EUA Reporting@fda.hhs.gov) and Siemens Healthineers Technical Support (https://www.siemens-healthineers.com/en-us/; tel: 1-877-229-3711) any suspected occurrence of false reactive (positive) or false nonreactive (negative) results and significant deviations from the established performance characteristics of the assay of which they become aware.

All laboratory personnel using the Atellica IM SARS-CoV-2 IgG (sCOVG) assay must be appropriately trained in automated immunoassay techniques and use appropriate laboratory and personal protective equipment when handling this kit, and use the Atellica IM SARS-CoV-2 IgG (sCOVG) assay in accordance with the authorized labeling. All laboratory personnel using the assay must also be trained in and be familiar with the interpretation of results of the the Atellica IM SARS-CoV-2 IgG (sCOVG) assay.

• Siemens Healthineers, authorized distributors, and authorized laboratories using the Atellica IM SARS-CoV-2 IgG (sCOVG) assay must ensure that any records associated with this EUA are maintained until otherwise notified by FDA. Such records will be made available to FDA for inspection upon request.

Performance Characteristics

Analytical Measuring Interval

0.50–150.00 Index is reported as Nonreactive (< 1.00 Index) or Reactive (≥ 1.00 Index).

The lower limit of the analytical measuring interval is defined by the LoQ (0.50 Index). However, report nonreactive patient results as < 1.00 Index. When sample results exceed the upper limit of the analytical measuring interval, refer to *Dilutions*.

Detection Capability

Detection capability was determined in accordance with CLSI Document EP17-A2.¹⁹ The following results were obtained:

Method	Result (Index)
Limit of Blank (LoB)	0.40
Limit of Detection (LoD)	0.50
Limit of Quantitation (LoQ)	0.50

Results obtained at individual laboratories may vary from the data presented.

The LoB corresponds to the highest measurement result that is likely to be observed for a blank sample with a probability of 95%. The estimate of the LoB based on 2 reagent lots is 0.40 Index.

The LoD corresponds to the lowest concentration of IgG antibodies to SARS-CoV-2 that can be detected with a probability of 95%. The estimate of the LoD based on 2 reagent lots is 0.50 Index.

The LoQ corresponds to the lowest concentration of IgG antibodies to SARS-CoV-2 in a sample at which the within laboratory CV is \leq 20%. The LoQ of the assay based on 2 reagent lots is 0.50 Index.

The lower limit of the analytical measuring interval is defined by the LoQ (0.50 Index). However, report nonreactive patient results as < 1.00 Index.

^a The letter of authorization refers to, "Laboratories certified under the Clinical Laboratory Improvement Amendments of 1988 (CLIA), 42 U.S.C. §263a, that meet requirements to perform moderate or high complexity tests" as "authorized laboratories".

Seroconversion Sensitivity

A total of 68 specimens were collected serially from 10 subjects with a clinical diagnosis of COVID-19 based on a positive SARS-CoV-2 polymerase chain reaction (PCR) result. Of these, seroconversion was observed in 10 panels with 2 or more nonreactive blood draws and 2 or more reactive blood draws with the Atellica IM sCOVG assay using the Atellica IM Analyzer. The results are shown in the table below:

		Number	First Draw		Last Nonreact Draw	ive	First Reactive Draw		Last Draw	
Panel	Number of Draws	of Reactive Draws	Days Post PCR Positive	Index						
А	5	3	0	0.14	2	0.42	4	2.92	12	>150
В	6	3	0	0.00	4	0.57	8	58.42	12	>150
С	11	9	2	0.31	3	0.62	4	1.61	26	>150
D	11	9	0	0.07	2	0.09	4	1.27	27	>150
Е	5	2	0	0.04	3	0.12	14	43.28	17	65.10
F	4	2	0	0.07	6	0.13	13	14.33	17	13.57
G	9	4	0	0.01	12	0.11	16	2.94	26	8.81
Н	5	2	1	0.00	7	0.16	9	1.66	12	15.73
1	6	4	0	0.16	2	0.70	5	4.86	14	13.99
J	6	3	0	0.00	5	0.22	8	19.91	12	83.28

Clinical Agreement

Positive percent agreement and negative percent agreement were determined in accordance with CLSI Document EP12-A2.²⁰ The performance of the Atellica IM sCOVG assay was determined by testing a total of 2706 prospective and retrospective samples using the Atellica IM Analyzer.

Positive Percent Agreement

Positive percent agreement was determined by testing 711 retrospective samples collected over the course of time from unique donor subjects with a clinical diagnosis of COVID-19 based on a positive SARS-CoV-2 polymerase chain reaction (PCR) method. The following table describes positive percent agreement by time of sampling following a positive PCR result:

Days After PCR Method	Number Tested	Reactive	Nonreactive	Positive Percent Agreement (95% CI)
0–7	324	165	159	50.93% (45.58%–56.03%)
8–14	138	108	30	78.26% (76.38%–87.55%)
≥ 15	249	238	11	95.58% (92.23%–97.77%)

Negative Percent Agreement

Negative percent agreement was determined by testing 1995 samples collected prospectively prior to the COVID-19 outbreak (before November 2019) from apparently healthy individuals and apparently healthy pregnant women in the United States. The results are shown in the table below:

Group	Number Tested	Nonreactive	Reactive	Negative Percent Agreement (95% CI)
Apparently Healthy	1952	1950	2	99.90% (99.63%–99.99%)
Apparently Healthy Pregnant Women	43	43	0	100% (91.78%–100%)
Total	1995	1993	2	99.90% (99.64%–99.99%)

Precision

Single-Site Precision

Precision was determined in accordance with CLSI Document EP05-A3.²¹ A single-site precision study for the Atellica IM sCOVG assay was conducted. Samples and assay controls (a Negative Control and a Positive Control) were assayed in duplicate, in 2 runs per day for 20 days using the Atellica IM Analyzer. Results for the precision of the Atellica IM sCOVG assay are presented in the following table:

			Repeatability		Within-Labor	atory Precision
Specimen Type	N ^a	Mean (Index)	SD ^b (Index)	CV ^c (%)	SD (Index)	CV (%)
Serum A	80	1.89	0.043	2.3	0.114	6.0
Serum B	80	2.73	0.062	2.3	0.095	3.5
Serum C	80	52.49	2.450	4.7	3.747	7.1
Serum D	80	96.67	6.191	6.4	6.885	7.1
Lithium Heparin Plasma A	80	0.91	0.025	2.7	0.041	4.5
Lithium Heparin Plasma B	80	2.47	0.082	3.3	0.102	4.1
Lithium Heparin Plasma C	80	2.77	0.061	2.2	0.104	3.8
Control 1	80	0.00	0.004	N/A ^d	0.008	N/A
Control 2	80	4.53	0.087	1.9	0.179	4.0

Number of measurements.

Results obtained at individual laboratories may vary from the data presented.

b Standard deviation.

Coefficient of variation.

d Not applicable.

Instrument and Lot Reproducibility

Reproducibility of the Atellica IM sCOVG assay was evaluated on 2 Atellica IM instruments using 2 reagent lots. Samples and assay controls (a Negative Control and a Positive Control) were assayed in duplicate in 2 runs per day for 5 days. The data were analyzed to calculate the following components of precision: repeatability, between-run, between-day, between-lot, between-instrument, and reproducibility (total). Results for the reproducibility of the Atellica IM sCOVG assay are presented in the following table:

			Repeata	bility	Betweer Run	1-	Betweer Day	1-	Betweer	n-Lot	Betweer Instrum		Reproduc	cibility
Sample	Nª	Mean (Index)	SD ^b (Index)	CV ^c (%)	SD (Index)	CV (%)	SD (Index)	CV (%)	SD (Index)	CV (%)	SD (Index)	CV (%)	SD (Index)	CV (%)
Serum A	80	1.97	0.053	2.7	0.047	2.4	0.049	2.5	0.088	4.5	0.000	0.0	0.123	6.3
Serum B	80	2.81	0.096	3.4	0.000	0.0	0.070	2.5	0.085	3.0	0.000	0.0	0.146	5.2
Serum C	80	52.56	2.208	4.2	1.173	2.2	2.381	4.5	1.826	3.5	0.000	0.0	3.905	7.4
Serum D	80	97.78	5.116	5.2	2.946	3.0	3.483	3.6	0.000	0.0	2.189	2.2	7.195	7.4
Lithium Heparin Plasma A	80	0.94	0.034	3.6	0.000	0.0	0.026	2.8	0.022	2.4	0.000	0.0	0.048	5.1
Lithium Heparin Plasma B	80	2.54	0.076	3.0	0.018	0.7	0.059	2.3	0.087	3.4	0.000	0.0	0.131	5.2
Lithium Heparin Plasma C	80	2.85	0.091	3.2	0.025	0.9	0.058	2.0	0.087	3.0	0.000	0.0	0.140	4.9
Control 1	80	0.01	0.007	N/A ^d	0.002	N/A	0.006	N/A	0.000	N/A	0.000	N/A	0.010	N/A
Control 2	80	4.58	0.108	2.3	0.087	1.9	0.084	1.8	0.077	1.7	0.000	0.0	0.179	3.9

a Number of measurements.

Specimen Equivalency

Matched sample sets (serum and lithium heparin plasma) from the same donors were used for the matrix comparison studies. Samples contained SARS-CoV-2 IgG levels distributed across the measuring interval. Specimen equivalency was determined by testing the samples with the Atellica IM sCOVG assay using the Atellica IM Analyzer in accordance with CLSI Document EP35-Ed1.²²

Using a weighted Deming regression model, results from plasma samples were compared to serum results. The following results were obtained:

Plasma (y) vs. Serum (x)	Nª	Sample Interval	Slope (95% CI)	Intercept (95% CI)	r ^b
Lithium heparin (plasma)	47	0.69–85.90 Index	1.02 (1.01–1.04)	0.004 (-0.033–0.040)	0.998

^a Number of samples tested.

b Standard deviation.

^c Coefficient of variation.

d Not applicable.

b Correlation coefficient.

Agreement of the specimen types may vary depending on the study design and sample population used. Assay results obtained at individual laboratories may vary from the data presented.

Interferences

Interference testing was performed in accordance with CLSI Document EP07-ed3. 23 The impact of potentially interfering substances on the detection of SARS-CoV-2 IgG antibodies with the Atellica IM sCOVG assay was evaluated with endogenous substances commonly found in serum and plasma specimens, including hemoglobin, conjugated bilirubin, unconjugated bilirubin, triglycerides, biotin, cholesterol, and protein. Serum samples were spiked with SARS-CoV-2 IgG at the following levels: unspiked, near cut-off (\sim 1.0 Index), and low positive (\sim 1.5 Index). Testing demonstrated a \leq 10% change for each substance at the indicated concentration.

Substance	Substance Test Concentration
Hemoglobin	1000 mg/dL
Bilirubin, conjugated	40 mg/dL
Bilirubin, unconjugated	40 mg/dL
Triglycerides (Intralipid)	2000 mg/dL
Biotin	3500 ng/mL
Cholesterol	500 mg/dL
Protein, total	12 g/dL

Cross-Reactivity

Cross-reactivity was determined in accordance with CLSI Document EP07-ed3.²³ The assay was evaluated for potential cross-reactivity using specimens containing antibodies to other pathogens and other disease states using the Atellica IM sCOVG assay with the Atellica IM Analyzer.

Clinical Category	Number Tested	Number Reactive with Atellica IM sCOVG Assay
Autoimmune diseases ^a	14	0
Candida albicans antibody	10	0
Chlamydia pneumoniae IgG	10	0
Chlamydia trachomatis IgM	4	0
Cytomegalovirus (CMV) IgG	5	0
Cytomegalovirus (CMV) IgM	5	0
Epstein Barr virus (EBV) IgG	5	0
Epstein Barr virus (EBV) IgM	5	0
Haemophilus influenzae b (Hib) IgG	20	0
Hepatitis A virus (HAV) IgM	4	0
Hepatitis B core (anti-HBc) IgM	5	0
Hepatitis C virus (HCV) antibody	5	0

Clinical Category	Number Tested	Number Reactive with Atellica IM sCOVG Assay
Human anti-mouse antibody (HAMA)	2	0
Human coronavirus antibodies ^b	29	0
Human herpes virus (HHV) IgM	2	0
Human immunodeficiency virus (HIV) antibody	9	0
Human metapneumovirus (HMPV) IgG	5	1
Influenza antibody	29	0
Influenza A antibody	6	0
Influenza B antibody	10	0
Measles antibody	5	0
Middle East respiratory syndrome coronavirus (MERS-CoV) IgG	5	0
Mycoplasma pneumoniae IgG	19	0
Parvovirus B19 antibody	5	0
Respiratory pathogen antibodies ^c	23	0
Respiratory syncytial virus (RSV) antibody	20	0
Severe acute respiratory syndrome coronavirus (SARS-CoV-1) lgG	5	0
Streptococcus pneumoniae anti-PCP IgG	10	0
Toxoplasma gondii antibody	10	0
Toxoplasma gondii IgG	20	0
Varicella zoster virus (VZV) antibody	4	0
Total	310	1

- ^a This group consists of samples from 14 subjects with autoimmune disease states including anti-nuclear antibody (ANA; N = 5), Graves' disease (N = 5), and rheumatoid factor (RF; N = 4).
- b This panel includes 29 subjects who had antibodies to multiple human coronaviruses, including coronavirus HKU (N = 24), coronavirus OC43 (N = 27), coronavirus 229E (N = 29), and coronavirus NL63 (N = 21).
- This panel consists of samples from 23 subjects with antibodies to multiple respiratory pathogens, including Adenovirus antibodies (N = 8), Bordetella pertussis IgG (N = 19), Chlamydia pneumoniae IgG (N = 23), Chlamydia psittaci IgG (N = 3), Chlamydia psittaci IgM (N = 1), Haemophilus influenzae b (Hib) IgG (N = 11), Influenza A IgG (N = 22), Influenza A IgM (N = 1), Influenza B IgG (N = 18), Influenza B IgM (N = 1), and Mycoplasma pneumoniae IgG (N = 6).

Results obtained at individual laboratories may vary from the data presented.

Linearity

Linearity testing was performed in accordance with CLSI Document EP06-A.²⁴

Patient pools containing high levels of SARS-CoV-2 IgG (2 serum and 1 lithium heparin plasma) were diluted with negative basepool to prepare a dilution series comprised of nine (9) levels. Each level was tested in 3 replicates using the Atellica IM Analyzer. Linearity was demonstrated for the analytical measuring interval of 0.50–150.00 Index with deviations from linearity within 15%.

Taking into consideration the estimates of LoB, LoD, LoQ, precision, and linearity, the analytical measuring interval of the Atellica IM sCOVG assay is 0.50–150.00 Index.

Extended Measuring Interval (Dilutions)

Four serum samples and four lithium heparin plasma samples in the range of 132.00–243.59 Index were diluted 1:5, 1:10, and 1:20 with Atellica IM sCOVG DIL and assayed for recovery. The recoveries ranged from 79.8%–102.1%.

The extended measuring interval of the Atellica IM sCOVG assay by dilution with Atellica IM sCOVG DIL is 150.00–3000 Index.

1:5 26.23 26.40 99.3 1:10 12.68 13.20 96.0 1:20 6.09 6.60 92.3 erum 2 — 210.80 — — 1:5 41.86 42.16 99.3 1:10 21.52 21.08 102.1 1:20 10.51 10.54 99.7 erum 3 — 207.70 — erum 3 — 207.70 — 1:5 39.86 41.54 96.0 1:10 19.91 20.77 95.9 erum 4 — 190.20 — — erum 4 — 190.20 — — 1:10 17.58 19.02 92.4 1:20 8.39 9.51 88.3 ithium heparin plasma 1 — 179.63 — — 1:5 35.79 35.93 99.6 1:10 17.77 17.96 98.9 1:20 8.98 8.98 100.0 ithium heparin plasma 2 — <th>Sample</th> <th>Dilution</th> <th>Observed (Index)</th> <th>Expected (Index)</th> <th>Recovery (%)</th>	Sample	Dilution	Observed (Index)	Expected (Index)	Recovery (%)
1:10	Serum 1	_	132.00	_	<u> </u>
erum 2 — 210.80 — — 1:5 41.86 42.16 99.3 1:10 21.52 21.08 102.1 1:20 10.51 10.54 99.7 erum 3 — 207.70 — — 1:5 39.86 41.54 96.0 1:10 19.91 20.77 95.9 1:20 9.21 10.39 88.7 erum 4 — 190.20 — — 1:5 36.70 38.04 96.5 1:10 17.58 19.02 92.4 1:20 8.39 9.51 88.3 ithium heparin plasma 1 — 179.63 — — 1:5 35.79 35.93 99.6 1:10 17.77 17.96 98.9 1:20 8.98 8.98 100.0 ithium heparin plasma 2 — 151.21 — — 1:10 14.73 15.12 97.4 1:20 6.31 7.56 83.5 ithium		1:5	26.23	26.40	99.3
erum 2 — 210.80 — — — — — — — — — — — — — — — — — — —		1:10	12.68	13.20	96.0
1:5 41.86 42.16 99.3 1:10 21.52 21.08 102.1 1:20 10.51 10.54 99.7 erum 3 — 207.70 — — 1:5 39.86 41.54 96.0 1:10 19.91 20.77 95.9 erum 4 — 190.20 — — 1:10 17.58 19.02 92.4 1:20 8.39 9.51 88.3 ithium heparin plasma 1 — 179.63 — — 1:5 35.79 35.93 99.6 1:10 17.77 17.96 98.9 ithium heparin plasma 2 — 151.21 — — 1:5 27.22 30.24 90.0 1:10 14.73 15.12 97.4 ithium heparin plasma 3 — 208.00 — —		1:20	6.09	6.60	92.3
1:10 21.52 21.08 102.1 1:20 10.51 10.54 99.7 erum 3 — 207.70 — — 1:5 39.86 41.54 96.0 1:10 19.91 20.77 95.9 1:20 9.21 10.39 88.7 erum 4 — 190.20 — — 1:10 17.58 19.02 92.4 1:20 8.39 9.51 88.3 ithium heparin plasma 1 — 179.63 — — 1:5 35.79 35.93 99.6 1:10 17.77 17.96 98.9 ithium heparin plasma 2 — 151.21 — — 1:10 14.73 15.12 97.4 1:20 6.31 7.56 83.5 ithium heparin plasma 3 — 208.00 — —	Serum 2	<u> </u>	210.80	_	_
1:20		1:5	41.86	42.16	99.3
erum 3 — 207.70 — — — — — — — — — — — — — — — — — — —		1:10	21.52	21.08	102.1
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1:5 27.22 30.24 90.0 1:10 14.73 15.12 97.4 1:20 6.31 7.56 83.5 ithium heparin plasma 3 — 208.00 — —		1:20	8.98	8.98	100.0
1:10 14.73 15.12 97.4 1:20 6.31 7.56 83.5 ithium heparin plasma 3 — 208.00 — —	Lithium heparin plasma 2		151.21	_	_
1:20 6.31 7.56 83.5 ithium heparin plasma 3 — 208.00 — —		1:5	27.22	30.24	90.0
ithium heparin plasma 3 — 208.00 — — —		1:10	14.73	15.12	97.4
		1:20	6.31	7.56	83.5
1:5 35.81 41.60 86.1	Lithium heparin plasma 3		208.00	_	_
		1:5	35.81	41.60	86.1

		Observed	Expected	Recovery
Sample	Dilution	(Index)	(Index)	(%)
	1:10	17.63	20.80	84.7
	1:20	8.30	10.40	79.8
Lithium heparin plasma 4	_	243.59	_	_
	1:5	44.72	48.72	91.8
	1:10	24.36	24.36	100.0
	1:20	12.17	12.18	99.9
Mean				94.1

Assay results obtained at individual laboratories may vary from the data presented.

Traceability

The Atellica IM sCOVG assay is traceable to an internal standard based on agreement with known positive and negative SARS-CoV-2 samples.

Technical Assistance

For customer support, contact your local technical support provider or distributor. siemens-healthineers.com

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Definition of Symbols

The following symbols may appear on the product labeling:

Symbol	Symbol Title and Description
<u>li</u>	Consult instructions for use
i Rev. 01	Version of instructions for use
siemens.com/healthcare siemens.com/document-library	Internet URL address to access the electronic instructions for use
Rev. REVISION	Revision
\triangle	Caution Consult instructions for use or accompanying documents for cautionary information such as warnings and precautions that cannot, for a variety of reasons, be presented on the medical device.
8	Biological risks Potential biological risks are associated with the medical device.
	Corrosive
(*)	Dangerous to environment
(1)	Irritant Oral, dermal, or inhalation hazard
&	Inhalation hazard Respiratory or internal health
	Flammable Flammable to extremely flammable
	Oxidizing
	Explosive
	Toxic
\Leftrightarrow	Compressed gas
*	Keep away from sunlight Prevent exposure to sunlight and heat.

Symbol	Symbol Title and Description
<u>11</u>	Up Store in an upright position.
()	Do not freeze
1 2°C 1 8°C	Temperature limit Upper and lower limits of temperature indicators are adjacent to the upper and lower horizontal lines.
	Handheld barcode scanner
IVD	In vitro diagnostic medical device
$\sum_{n=1}^{\infty} (n)$	Contains sufficient for <n> tests Total number of IVD tests the system can perform with the IVD kit reagents appears adjacent to the symbol.</n>
RxOnly	Prescription device (US only) Applies only to United States-registered IVD assays. CAUTION: Federal (USA) law restricts this device to sale by or on the order of a licensed healthcare professional.
2	Mixing of substances Mix product before use.
g mL → I ←	Reconstitute and mix lyophilized product before use.
→┃←	Target
← →	Interval
•••	Legal Manufacturer
EC REP	Authorized Representative in the European Community
\square	Use-by date Use by the designated date.
LOT	Batch code
REF	Catalog number
E	Recycle
PRINTED WITH SOY INK	Printed with soy ink
C€	CE Mark

Symbol	Symbol Title and Description
C € xxxx	CE Mark with notified body ID number Notified body ID number can vary.
YYYY-MM-DD	Date format (year-month-day)
CHECKSUM	Variable hexadecimal number that ensures the Master Curve and Calibrator definition values entered are valid.
MC DEF	Master Curve Definition
LOT DTL	Lot Details
UNITS C	Common Units
UNITS SI	International System of Units
MATERIAL	Material
MATERIAL ID	Unique material identification number
CONTROL NAME	Name of control
CONTROL TYPE	Type of control

Legal Information

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SARS-CoV-2 IgG Quality Control (sCOVG QC)

Current Revision and Date ^a	Rev. 02, 2021-07	
Product Name	Atellica IM SARS-CoV-2 IgG Quality Control (sCOVG QC)	
Abbreviated Product Name	Atellica IM sCOVG QC	
	2 x 2.0 mL negative quality control, level 1 control 1 2 x 2.0 mL positive quality control, level 2 + 2 control Quality control assigned value control val	REF 11207388
Systems	Atellica IM Analyzer	

^a A vertical bar in the page margin indicates technical content that differs from the previous version.

FOR USA:

For Use Under Emergency Use Authorization Only

For in vitro diagnostic use only.

For Prescription Use Only.

Intended Use

The Atellica® IM SARS-CoV-2 IgG Quality Control (sCOVG QC) is for *in vitro* diagnostic use in monitoring the precision and accuracy of the Atellica® IM SARS-CoV-2 IgG (sCOVG) assay using the Atellica® IM Analyzer.

Material Description

Material Description	Storage	Stability
Atellica IM sCOVG QCa, b Control 1: 2.0 mL/vial	Unopened at 2–8° C	Until expiration date on product
Processed* human plasma nonreactive for SARS-CoV-2	Opened at 2-8° C	60 days
antibodies; sodium azide (< 0.1%) *Processed plasma is defibrinated and filtered plasma.	At room temperature	8 hours
	Atellica® Sample Handler ^c	

sCOVG Atellica IM

Material Description	Storage	Stability
Atellica IM sCOVG QCa, b Control 2: 2.0 mL/vial	Unopened at 2–8° C	Until expiration date on product
Horse serum spiked with human monoclonal IgG	Opened at 2-8° C	60 days
antibodies to SARS-CoV-2; sodium azide (< 0.1%)	At room temperature	8 hours
	Atellica® Sample	
	Handler ^c	

- ^a Store in an upright position.
- b Prevent exposure to sunlight and heat.
- Refer to the supplementary document "Atellica Sample Handler Calibrator and QC Storage and Stability" for information about storage and stability of materials in the Cal-QC tube storage area.

Warnings and Precautions

FOR USA:

For Use Under Emergency Use Authorization Only

For in vitro diagnostic

use. For Prescription Use

Only.

This product has not been FDA cleared or approved, but has been authorized for emergency use by FDA under an EUA for use by authorized laboratories.

This product is for use with a test authorized only for detecting the presence of IgG antibodies to SARS-CoV-2, not for any other viruses or pathogens.

The emergency use of this product is only authorized for the duration of the declaration that circumstances exist justifying the authorization of emergency use of *in vitro* diagnostics for detection and/or diagnosis of COVID-19 under Section 564(b)(1) of the Federal Food, Drug and Cosmetic Act, 21 U.S.C. § 360bbb-3(b)(1), unless the declaration is terminated or authorization is revoked sooner.

CAUTION

Federal (USA) law restricts this device to sale by or on the order of a licensed healthcare professional.

Safety data sheets (SDS) available on siemens-healthineers.com.



CAUTION POTENTIAL BIOHAZARD

Contains human source material. Each donation of human blood or blood component was tested by FDA-approved methods for the presence of antibodies to human immunodeficiency virus type 1 (HIV-1) and type 2 (HIV-2), as well as for hepatitis B surface antigen (HBsAg) and antibody to hepatitis C virus (HCV). The test results were negative (not repeatedly reactive). Notest offers complete assurance that these or other infectious agents are absent; this material should be handled using good laboratory practices and universal precautions.¹⁻³

CAUTION

This device contains material of animal origin and should be handled as a potential carrier and transmitter of disease.

Contains sodium azide as a preservative. Sodium azide can react with copper or lead plumbing to form explosive metal azides. On disposal, flush reagents with a large volume of water to prevent buildup of azides. Disposal into drain systems must be in compliance

Atellica IM sCOVG

with prevailing regulatory requirements.

Atellica IM sCOVG

Dispose of hazardous or biologically contaminated materials according to the practices of your institution. Discard all materials in a safe and acceptable manner and in compliance with prevailing regulatory requirements.

Storage and Stability

Store quality control materials in an upright position. Quality control materials are stable until the expiration date on the product when stored at 2–8° C. Discard products at the end of the onboard stability interval. Do not use products beyond the expiration date printed on the product labeling.

For information about product storage and stability, refer to Material Description.

Performing Quality Control

Perform the quality control procedure at least once during each day that samples are analyzed. Test quality control samples after a successful calibration.

Follow government regulations or accreditation requirements for quality control frequency. Individual laboratory quality control programs and procedures may require more frequent quality control testing.

Treat all quality control samples the same as patient samples.

Preparing the Quality Control Materials

Quality control materials are liquid and ready to use. Gently mix and invert the vials to ensure homogeneity of the material.

Note Use quality control material within the stability limits specified in *Material Description*

and discard any remaining material.

Quality Control Procedure

The product is provided in dropper vials. Each dispensed drop is approximately 50 μ L. The required sample volume for testing depends on several factors. For information about sample volume requirements, refer to the system online help.

Use the following lot-specific materials to perform quality control:

- For the quality control (QC) definitions, refer to the lot-specific value sheet provided with the quality control materials.
- Generate lot-specific barcode labels to use with the quality control samples.

For instructions about how to perform the quality control procedure, refer to the system online help.

Taking Corrective Action

If the quality control results do not fall within the assigned values, do not report results. Perform corrective actions in accordance with established laboratory protocol. For suggested protocol, refer to the system online help.

Expected Values

For the assigned values, refer to the quality control value sheeting to the performance is achieved when the analyte values obtained are within the expected control interval for the system or within your interval, as determined by an appropriate internal laboratory quality control scheme. Follow your laboratory's quality control procedures if the results obtained do not fall within the acceptable limits. For information about entering QC definitions, refer to the system online help.

sCOVG Atellica IM

The assigned values are traceable to the standardization of the assay. For additional information, refer to the assay instructions for use.

Limitations

The Atellica IM sCOVG QC is for use only with the Atellica IM sCOVG assay. Assay values have not been established for assays other than the Atellica IM sCOVG assay.

The results obtained using quality control material depend on several factors. Erroneous results can occur from causes such as improper storage, inadequate mixing, reconstitution errors, or sample handling errors associated with system or assay procedures.

The assigned control values should be used as a guide in evaluating performance. The controltargets and intervals should be adapted to each laboratory's individual requirements. Values obtained should fall within the established interval. Each laboratory should establish corrective measures if individual values fall outside the interval. Follow the applicable government regulations and local guidelines for quality control.

Technical Assistance

For customer support, contact your local technical support provider or distributor.siemens-healthineers.com

References

- 1. Centers for Disease Control. Perspectives in disease prevention and health promotion update: Universal precautions for prevention of transmission of human immunodeficiencyvirus, hepatitis B virus and other bloodborne pathogens in healthcare settings. *MMWR*. 1988;37(24):377–382, 387–388.
- 2. Clinical and Laboratory Standards Institute. *Procedures for the Handling and Processing of Blood Specimens for Common Laboratory Tests; Approved Guideline—Fourth Edition*. Wayne, PA: Clinical and Laboratory Standards Institute; 2010. CLSI Document GP44-A4.
- 3. Clinical and Laboratory Standards Institute. *Protection of Laboratory Workers From Occupationally Acquired Infections; Approved Guideline—Fourth Edition.* Wayne, PA: Clinical and Laboratory Standards Institute; 2014. CLSI Document M29-A4.

Definition of Symbols

The following symbols may appear on the product labeling:

Symbo	Symbol Title and
Ţ <u>i</u>	Consult instructions for use
i Rev. 01	Version of instructions for
siemens.com/healthcare REVISION siemens.com/document-library	Internet URL address to access the electronic instructions
\triangle	Revision
	Caution Consult instructions for use or accompanying documents for cautionary information such as warnings and precautions that cannot, for a variety of reasons, be presented on the medical device.

Atellica IM sCOVG

Symbol	Symbol Title and Description
8	Biological risks Potential biological risks are associated with the medical device.
	Corrosive
(£)	Dangerous to environment
	Irritant Oral, dermal, or inhalation hazard
\$	Inhalation hazard Respiratory or internal health
	Flammable Flammable to extremely flammable
	Oxidizing
	Explosiv
	еТохіс
\Diamond	Compressed gas
*	Keep away from sunlight Prevent exposure to sunlight and heat.
<u>11</u>	Up Store in an upright position.
	Do not freeze
1 2°C 1 8°C	Temperature limit Upper and lower limits of temperature indicators are adjacent to the upper and lower horizontal lines.
	Handheld barcode scanner
IVD	In vitro diagnostic medical device

sCOVG Atellica IM

Symbol	Symbol Title and Description
$\sum_{n=1}^{\infty} (n)$	Contains sufficient for <n> tests Total number of IVD tests the system can perform with the IVD kit reagents appears adjacent to the symbol.</n>
RxOnly	Prescription device (US only) Applies only to United States-registered IVD assays. CAUTION: Federal (USA) law restricts this device to sale by or on the order of a licensed healthcare professional.
2	Mixing of substances Mix product before use.
g mL → I ←	Reconstitute and mix lyophilized product before use.
→ ←	Target
$\left \longleftarrow\rightarrow\right $	Interval
	Legal Manufacturer
EC REP	Authorized Representative in the European Community
\square	Use-by date
	Use by the designated date.
LOT	Batch code
REF	Catalog number
£3	Recycle
PRINTED WITH SOY INK	Printed with soy ink
CE	CE Mark
C € 0088	CE Mark with notified body ID number Notified body ID number can vary.
YYYY-MM-DD	Date format (year-month-day)
СНЕСКЅИМ	Variable hexadecimal number that ensures the Master Curve and Calibrator definition values entered are valid.
UNITS C	Common Units
UNITS SI	International System of Units
MATERIAL	Material

Atellica IM sCOVG

Symbo	Symbol Title and
MATERIAL ID	Unique material identification
CONTROL NAME	number Name of control
CONTROLTYPE	Type of control

Legal Information

Atellica is a trademark of Siemens Healthcare Diagnostics.

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sCOVG Atellica IM





SARS-CoV-2 IgG Master Curve Material (sCOVG MCM)

Current Revision and Date ^a	Rev. 02, 2021-08	
Product Name	Atellica IM SARS-CoV-2 IgG Master Curve Material (sCOVG MCM)	
Abbreviated Product Name	ADVIA Centaur sCOVG MCM	
	4 x 1.0 mL levels of master curve material MCM 1-4 REF 11207587 Master curve material assigned value sheet MCM LOT VAL	
Systems	Atellica IM Analyzer	

^a A vertical bar in the page margin indicates technical content that differs from the previous version.

FOR USA:

For Use Under Emergency Use Authorization Only

For in vitro diagnostic use only.

For Prescription Use Only.

Intended Use

The Atellica® IM SARS-CoV-2 IgG Master Curve Material (sCOVG MCM) is for *in vitro* diagnostic use in the verification of calibration and measuring interval of the Atellica® IM SARS-CoV-2 IgG (sCOVG) assay.

Material Description

Material Description	Storage	Stability
Atellica IM sCOVG MCMa, b MCM: 1:	Unopened at 2–8°C	Until expiration date on product
1.0 mL/vial Processed* human plasma nonreactive for SARS-CoV-2	Opened at 2–8°C	60 days
antibodies; sodium azide (< 0.1%) *Processed plasma is defibrinated and filtered plasma.	At room temperature	8 hours
Atellica IM sCOVG MCM ^{a, b} MCM 2–4:	Unopened at 2–8°C	Until expiration date on product
1.0 mL/vial Horse serum spiked with human monoclonal IgG antibodies to SARS-CoV-2; sodium azide (< 0.1%)	Opened at 2–8°C	60 days
	At room temperature	8 hours

^a Store in an upright position.

b Prevent exposure to sunlight and heat.

Warnings and Precautions

FOR USA:

For Use Under Emergency Use Authorization Only

For in vitro diagnostic use.

For Prescription Use Only.

This product has not been FDA cleared or approved, but has been authorized for emergency use by FDA under an EUA for use by authorized laboratories.

This product is for use with a test authorized only for detecting the presence of IgG antibodies to SARS-CoV-2, not for any other viruses or pathogens.

The emergency use of this product is only authorized for the duration of the declaration that circumstances exist justifying the authorization of emergency use of *in vitro* diagnostics for detection and/or diagnosis of COVID-19 under Section 564(b)(1) of the Federal Food, Drug and Cosmetic Act, 21 U.S.C. § 360bbb3(b)(1), unless the declaration is terminated or authorization is revoked sooner.

CAUTION

Federal (USA) law restricts this device to sale by or on the order of a licensed healthcare professional.

Safety data sheets (SDS) available on siemens-healthineers.com.



CAUTION POTENTIAL BIOHAZARD

Contains human source material. Each donation of human blood or blood component was tested by FDA-approved methods for the presence of antibodies to human immunodeficiency virus type 1 (HIV-1) and type 2 (HIV-2), as well as for hepatitis B surface antigen (HBsAg) and antibody to hepatitis C virus (HCV). The test results were negative (not repeatedly reactive). No test offers complete assurance that these or other infectious agents are absent; this material should be handled using good laboratory practices and universal precautions.¹⁻³

CAUTION

This device contains material of animal origin and should be handled as a potential carrier and transmitter of disease.

Contains sodium azide as a preservative. Sodium azide can react with copper or lead plumbing to form explosive metal azides. On disposal, flush reagents with a large volume of water to prevent buildup of azides. Disposal into drain systems must be in compliance with prevailing regulatory requirements.

Dispose of hazardous or biologically contaminated materials according to the practices of your institution. Discard all materials in a safe and acceptable manner and in compliance with prevailing regulatory requirements.

Storage and Stability

Do not use products beyond the expiration date printed on the product labeling. For information about product storage and stability, refer to *Material Description*.

Preparing the Master Curve Material

Master curve materials are liquid and ready to use. Allow the master curve material to come to room temperature. Gently mix and invert the vials to ensure homogeneity of the material.

Master curve materials greater than the assay's measuring interval may be diluted with Atellica IM sCOVG MCM level 1 to within the measuring interval of the assay.

Note Use master curve materials within the stability limits specified in *Material Description* and discard any remaining material.

Scheduling the Master Curve Material

For instructions about how to perform measuring interval verification, refer to the system online help.

- Allow the master curve material to come to room temperature.
- Gently mix each vial and dispense a sufficient volume of each level into the appropriate sample cup.

Note The required sample volume for testing depends on several factors. For information about sample volume requirements, refer to the system online help.

- Do not pour the material back into the vials after testing because evaporation can occur, which may affect performance.
- Dispose of material remaining in the sample cups after 8 hours.
- Do not refill sample cups when the contents are depleted. If required, dispense fresh material into a new sample cup.

Evaluating the Results

Refer to the Atellica IM sCOVG MCM value sheet MCM LOT VAL for the assigned values. The assigned values represent the acceptable results for master curve material tested in triplicate as unknown samples. Each level is expected to be within its assigned interval. When evaluating results that are outside of the acceptable interval, use the same criteria used when evaluating patient and quality control results.

Master curve material is not intended for use as routine quality control material or as calibration material.

The results obtained depend on several factors. Erroneous results can occur from causes such as improper storage, inadequate mixing, reconstitution errors, or sample handling errors.

Technical Assistance

For customer support, contact your local technical support provider or distributor. siemens-healthineers.com

References

- 1. Centers for Disease Control. Perspectives in disease prevention and health promotion update: Universal precautions for prevention of transmission of human immunodeficiency virus, hepatitis B virus and other bloodborne pathogens in healthcare settings. *MMWR*. 1988;37(24):377–382, 387–388.
- 2. Clinical and Laboratory Standards Institute. *Procedures for the Handling and Processing of Blood Specimens for Common Laboratory Tests; Approved Guideline—Fourth Edition*. Wayne, PA: Clinical and Laboratory Standards Institute; 2010. CLSI Document GP44-A4.
- 3. Clinical and Laboratory Standards Institute. *Protection of Laboratory Workers From Occupationally Acquired Infections; Approved Guideline—Fourth Edition*. Wayne, PA: Clinical and Laboratory Standards Institute; 2014. CLSI Document M29-A4.

Definition of Symbols

The following symbols may appear on the product labeling:

Symbol	Symbol Title and Description
<u>li</u>	Consult instructions for use
i Rev. 01	Version of instructions for use
siemens.com/healthcare siemens.com/document-library	Internet URL address to access the electronic instructions for use
Rev. REVISION	Revision
\triangle	Caution Consult instructions for use or accompanying documents for cautionary information such as warnings and precautions that cannot, for a variety of reasons, be presented on the medical device.
8	Biological risks Potential biological risks are associated with the medical device.
	Corrosive
(*)	Dangerous to environment
(1)	Irritant Oral, dermal, or inhalation hazard
&	Inhalation hazard Respiratory or internal health
	Flammable Flammable to extremely flammable
	Oxidizing
	Explosive
	Toxic
\Leftrightarrow	Compressed gas
*	Keep away from sunlight Prevent exposure to sunlight and heat.

Symbol	Symbol Title and Description
<u>11</u>	Up Store in an upright position.
()	Do not freeze
\$ 2°C \$ 8°C	Temperature limit Upper and lower limits of temperature indicators are adjacent to the upper and lower horizontal lines.
	Handheld barcode scanner
IVD	In vitro diagnostic medical device
$\sum_{n} (n)$	Contains sufficient for <n> tests Total number of IVD tests the system can perform with the IVD kit reagents appears adjacent to the symbol.</n>
RxOnly	Prescription device (US only) Applies only to United States-registered IVD assays. CAUTION: Federal (USA) law restricts this device to sale by or on the order of a licensed healthcare professional.
2	Mixing of substances Mix product before use.
g mL → I ←	Reconstitute and mix lyophilized product before use.
→ ←	Target
← →	Interval
	Legal Manufacturer
EC REP	Authorized Representative in the European Community
Σ	Use-by date Use by the designated date.
LOT	Batch code
REF	Catalog number
E	Recycle
PRINTED WITH SOY INK	Printed with soy ink
C€	CE Mark

Symbol	Symbol Title and Description
€	CE Mark with notified body ID number Notified body ID number can vary.
YYYY-MM-DD	Date format (year-month-day)
CHECKSUM	Variable hexadecimal number that ensures the Master Curve and Calibrator definition values entered are valid.
UNITS C	Common Units
UNITS SI	International System of Units
MATERIAL	Material
MATERIAL ID	Unique material identification number
CONTROL NAME	Name of control
CONTROL TYPE	Type of control

Legal Information

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Atellica®	IM	SARS-CoV-2	laG	(sCOVG)
/ ttciiicu	1171	3/ 11/3 COV 2	190	

REF 11207386

REF 11207387

IVD

RxOnly FOR US

For Emergency Use Authorization Only

- This product has not been FDA cleared or approved, but has been authorized for emergency use by FDA under an EUA for use by authorized laboratories;
- This product has been authorized only for detecting the presence of IgG antibodies to SARS-CoV-2, not for any other viruses or pathogens; and
- The emergency use of this product is only authorized for the duration of the declaration that circumstances exist justifying the authorization of emergency use of in vitro diagnostics for detection and/or diagnosis of COVID-19 under Section 564(b)(1) of the Federal Food, Drug and Cosmetic Act, 21 U.S.C. § 360bbb-3 (b)(1), unless the declaration is terminated or authorization is revoked sooner.
- This card is not the full instructions for use (IFU). The full IFU can be downloaded from the Siemens Healthineers website at siemens.com/eifu; a printed copy of the IFU can be obtained free of charge by contacting Siemens Healthineers Customer Support at 1-888-588-3916.



Atellica® IM SARS-CoV-2 IgG (sCOVG) Quality Control (QC) Atellica® IM SARS-CoV-2 IgG (sCOVG) Master Curve Material (MCM)

REF 11207388

REF 11207587

IVD

RxOnly FOR US

For Emergency Use Authorization Only

- This product has not been FDA cleared or approved, but has been authorized for emergency use by FDA under an EUA for use by authorized laboratories;
- This product is for use with a test authorized only for detecting the presence of IgG antibodies to SARS-CoV-2, not for any other viruses or pathogens; and
- The emergency use of this product is only authorized for the duration of the declaration that circumstances exist justifying the authorization of emergency use of in vitro diagnostics for detection and/or diagnosis of COVID-19 under Section 564(b)(1) of the Federal Food, Drug and Cosmetic Act, 21 U.S.C. § 360bbb-3 (b)(1), unless the declaration is terminated or authorization is revoked sooner.
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