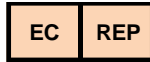


# AccuPlex™ SARS-CoV-2, Flu A/B and RSV

Molecular Controls Kit



SeraCare Life Sciences, Inc. | 37 Birch Street, Milford, MA 01757 USA  
Phone: +1 508.244.6400 | CDx-Info@LGCGroup.com

MEDIMARK® Europe  
11, rue Émile Zola BP 2332  
38033 Grenoble Cedex 2 – France  
+ 33 (0) 4 76 86 43 22  
info@medimark-europe.com

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## Explanation of symbols used in LGC SeraCare product labeling



Upper limit of temperature



Temperature limitation



Authorized Representative in  
the European Community



Biological risks



Use By



*In Vitro* Diagnostic Medical Device



Negative control



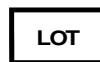
Catalogue number



Consult instructions for use



Positive control



Batch code



Manufacturer



Control



Single Use

# AccuPlex™ SARS-CoV-2, Flu A/B and RSV Molecular Controls Kit

## NAME AND INTENDED USE

AccuPlex™ SARS-CoV-2, Flu A/B and RSV Molecular Controls Kit is intended to be used as positive and negative controls to monitor laboratory testing precision and detect errors in laboratory testing procedures. The controls are formulated for use with *in vitro* diagnostic test methods that detect and differentiate SARS-CoV-2, Flu A/B and RSV virus. The controls are intended to estimate laboratory testing precision and can be used to detect errors in laboratory testing procedures. AccuPlex controls contain non-replicative recombinant viruses that are intended to assess the performance of the full process of a molecular test. AccuPlex can be used to evaluate test proficiency and accuracy through the full process because they are encapsulated viruses which require extraction and amplification. AccuPlex controls do not have quantitative assigned values. For professional laboratory use only.

## SUMMARY

Frequent testing of independent quality control samples provides the analyst with a means of monitoring the performance of laboratory assays. Routine use of controls enables laboratories to monitor day-to-day test variation, lot-to-lot performance of test kits, and operator variation, and can assist in identifying increases in random or systematic error. A well-designed quality control program can provide added confidence in the reliability of results obtained for unknown specimens. The use of low-reactive samples as independent controls may provide valuable information concerning laboratory proficiency and kit lot variation that may affect assay sensitivity<sup>1</sup>.

## PRINCIPLES OF THE PROCEDURE

AccuPlex SARS-CoV-2, Flu A/B and RSV Molecular Controls Kit has been designed for use with *in vitro* assay procedures for purposes of monitoring test performance. This product contains recombinant Alphavirus. This product contains recombinant Alphavirus. There are 5 vials of positive reference material (red caps) that contain recombinant virus particles with the following sequence coverage:

Virus	Genbank Accession Number	Regions Included
Flu A	KU933490 - KU933497	Full Genome
Flu B	CY236601.1- CY236608.1	Full Genome
RSV	NC_001803	1..4380; 8460..15191
SARS-CoV-2	NC_045512.2	Full Genome

There are also 5 vials of negative controls (clear caps) that contain recombinant virus particles with sequences from human RNase P gene (RP). The sequences are based on Genbank accession number NC\_00010.11. This material must go through extraction, similar to the patient sample.

AccuPlex SARS-CoV-2, Flu A/B and RSV Molecular Controls Kit do not have assigned values. The controls have been formulated at a targeted formulation of 5000 copies/mL, as measured using reverse transcription digital PCR, to perform as positive and negative controls in multiplex assays that detect SARS-CoV-2, Flu A/B and RSV. Example of a manufacturer's assay with which this control may be compatible is listed in Table 1. Specific performance will vary among different manufacturers' assays, different procedures, different lot numbers, and different laboratories.

## REAGENTS

Item No. 0505-0260	Positive: 0505-0262	5 x 1.5 mL vials
	Negative: 0505-0263	5 x 1.5 mL vials

The product is formulated in viral transport media that consists of Tris-buffered saline, with added glycerol, anti-microbial agents, and human plasma proteins.

## WARNINGS AND PRECAUTIONS

### For In Vitro Diagnostic Use

CAUTION: The recombinant viruses used to produce the AccuPlex SARS-CoV-2, Flu A/B and RSV Molecular Controls Kit are replication defective and heat-treated. However, handle AccuPlex products and all human blood products as though they can transmit infectious agents.

### Safety Precautions

Use the Centers for Disease Control (CDC) recommended universal precautions for handling AccuPlex controls<sup>2</sup>. Do not pipette by mouth; do not eat or drink in areas where specimens are being handled. Clean any spillage by immediately wiping up with 0.5% sodium hypochlorite solution. Dispose of all specimens, controls and materials used in testing as though they contain infectious agents. Additional safety information can be found in the product Safety Data Sheet (SDS) found on the company website.

### Handling Precautions

Do not use AccuPlex SARS-CoV-2, Flu A/B and RSV Molecular Controls Kit beyond the expiration date. Avoid microbial contamination of the controls when opening and closing the vials.

## STORAGE INSTRUCTIONS

Store the AccuPlex SARS-CoV-2 Molecular Controls Kit refrigerated at 2-8°C or frozen at -20°C. If stored at -20°C, once thawed maintain at 2-8°C. Do not expose to multiple freeze thaw cycles. Each vial can be used up to 10 times within 60 days of opening. To prevent leakage, store vials upright.

## INDICATIONS OF REAGENT INSTABILITY OR DETERIORATION

Alterations in physical appearance may indicate instability or deterioration of AccuPlex controls. Solutions that are visibly turbid should be discarded.

## PROCEDURE

### Materials Provided

AccuPlex SARS-CoV-2, Flu A/B and RSV Molecular Controls Kit is manufactured from recombinant virus particles in viral transport media. See REAGENTS for package size.

### Materials Required but not Provided

Refer to instructions supplied by manufacturers of the test kits to be used.

## Instructions for Use

Allow the product vial to come to room temperature before use. Mix by vortexing to ensure a homogeneous suspension. AccuPlex SARS-CoV-2, Flu A/B and RSV molecular controls should be added to a test run using the same procedure provided by the manufacturer for unknown specimens. AccuPlex SARS-CoV-2, Flu A/B and RSV molecular controls must go through an extraction process prior to detection by PCR. Process the product according to the instructions for unknown samples provided by the test kit or the laboratory's standard operating procedures. AccuPlex SARS-CoV-2, Flu A/B and RSV molecular controls must NOT be substituted for the positive and negative control reagents provided with the manufactured test kits.

## Quality Control

Since AccuPlex SARS-CoV-2, Flu A/B and RSV molecular controls do not have assigned values, it is recommended that each laboratory validate the use of each lot of AccuPlex SARS-CoV-2, Flu A/B and RSV Molecular Controls Kit with each specific assay system prior to its routine use in the laboratory.

## INTERPRETATION OF RESULTS

Levels of reactivity for the AccuPlex SARS-CoV-2, Flu A/B and RSV molecular controls may vary with different manufacturers' tests and different test kit lots. This product contains a targeted formulation of 5000 copies/mL as measured using reverse transcription digital PCR. Positive controls are intended to give positive results, while negative controls give negative or not detected results. Note that the positive controls may contain traces of RNase P and therefore generate a positive RNase P result due to the presence of a human plasma component in the product matrix; it is not designed or intended to be used as an RNase P control.

If AccuPlex SARS-CoV-2, Flu A/B and RSV molecular controls do not perform as expected, this may be an indication of unsatisfactory test performance. Possible sources of error include: deterioration of test kit reagents, operator error, faulty performance of equipment, or contamination of reagents.

## LIMITATIONS OF THE PROCEDURE

AccuPlex SARS-CoV-2, Flu A/B and RSV Molecular Controls Kit MUST NOT BE SUBSTITUTED FOR THE POSITIVE AND NEGATIVE CONTROL REAGENTS PROVIDED WITH MANUFACTURED TEST KITS.

TEST PROCEDURES and INTERPRETATION OF RESULTS provided by manufacturers of test kits must be followed closely. Deviations from procedures recommended by test kit manufacturers may produce unreliable results. AccuPlex SARS-CoV-2, Flu A/B and RSV molecular controls are qualitative, not automated, and must not be used for calibration or as a primary reference preparation in any test procedure. Performance characteristics for AccuPlex SARS-CoV-2, Flu A/B and RSV molecular controls have been established only for amplified nucleic acid tests for RNA only. Adverse shipping and/or storage conditions or use of outdated controls may produce erroneous results.

## EXPECTED RESULTS

**AccuPlex SARS-CoV-2, Flu A/B and RSV molecular controls DO NOT HAVE ASSIGNED VALUES.** Specific levels of reactivity will vary among different manufacturers' assays, different procedures, different lot numbers, and different laboratories. Procedures for implementing a quality assurance program and monitoring test performance on a routine basis must be established by each individual laboratory. Each laboratory should establish its own range of acceptable values, as appropriate. For example, the acceptable range might include all values within 2 standard deviations of the mean of 20 data points obtained in 20 runs over a period of 30 days<sup>3</sup>.

## SPECIFIC PERFORMANCE CHARACTERISTICS

AccuPlex SARS-CoV-2, Flu A/B and RSV Molecular Controls Kit has been designed for use with *in vitro* assay procedures for purposes of monitoring assay performance. The controls are intended for use with nucleic acid-based detection assays only. AccuPlex SARS-CoV-2, Flu A/B and RSV Molecular Controls Kit is manufactured from recombinant virus particles in universal transport media. AccuPlex SARS-CoV-2, Flu A/B and RSV molecular controls do not have assigned values. Specific levels of reactivity will vary among different manufacturers' assays, different procedures, different reagent lot numbers, and different laboratories. Procedures for implementing a quality assurance program and monitoring test performance on a routine basis must be established by each individual laboratory. Quality control materials should be used in accordance with local, state, and federal regulations and accreditation requirements.

## REFERENCES

- Green IV GA, Carey RN, Westgard JO, Carten T, Shablesky LA, Achord D, Page E, and Le AV. Quality control for qualitative assays: quantitative QC procedure designed to assure analytical quality required for an ELISA for hepatitis B surface antigen. Clin. Chem. 43:9 1618-1621, 1997.
- Siegel JD, Rhinehart E, Jackson M, Chiarello L, and the Healthcare Infection Control Practices Advisory Committee, 2007 Guideline for Isolation Precautions: Preventing Transmission of Infectious Agents in Healthcare Settings.
- Statistical Quality Control for Quantitative Measurements: Principles and Definitions; Approved Guideline—Second Edition. NCCLS document C24-A2, 1999.

Table 1. AccuPlex SARS-CoV-2, Flu A/B and RSV Molecular Controls Kit is tested at release using the following manufacturer's assays.

Assay Manufacturer/Test Name	Product Component	Result
Cepheid Xpert® Xpress SARS-CoV-2/Flu/RSV Kit	AccuPlex SARS-CoV-2, Flu A/B and RSV Molecular Controls: Positive Vial	Positive
	AccuPlex SARS-CoV-2, Flu A/B and RSV Molecular Controls: Negative Vial	Negative

For assistance, contact LGC SeraCare Technical Support at +1 508.244.6400.

Any serious incident that has occurred in relation to the device shall be reported to LGC SeraCare Technical Support and, if in use in the EU, the competent authority of the Member State in which the incident occurred.

Date	Description of Change
September 2021	Initial release