



# AccuPlex™ SARS-CoV-2 Quality Solutions

## ASSAY VERIFICATION AND ONGOING PERFORMANCE MONITORING FOR ROUTINE PATIENT TESTING

### HIGHLIGHTS

COMPATIBLE WITH CDC  
AND WHO CONSENSUS  
SEQUENCES FOR  
SARS-COV-2

ENHANCED VERSIONS  
ALSO AVAILABLE  
OFFERING EXPANDED  
SEQUENCE COVERAGE

REAL MAMMALIAN  
VIRUS ENABLES FULL-  
PROCESS QC FOR  
RT-PCR BASED VIRAL  
DISEASE ASSAYS

NON-INFECTIOUS  
AND REPLICATION  
DEFICIENT; ENSURES  
SAFETY DURING  
ASSAY DEVELOPMENT  
AND END-USER QC  
APPLICATIONS

AccuPlex™ SARS-CoV-2 Verification Panel, coupled with the AccuPlex™ SARS-CoV-2 Reference Material, is a complete Quality Solution. Both products are available in three versions with different SARS-CoV-2 sequence coverage: Version 1 covers the CDC and WHO consensus sequences, Version 2 has been enhanced to also include the S gene region, and Version 3 is expanded to include the full SARS-CoV-2 viral genome (Table 1). All products also include negative reference materials targeting the human RNase P gene.

**AccuPlex™ SARS-CoV-2 Verification Panel** is optimized for assay verification at installation by documenting test performance along the assay's range enabling laboratories to establish lower limits of detection, perform assay comparisons, and evaluate staff proficiency.

Product Description	Material Numbers	Sequence Coverage	Pack Size	Concentration
AccuPlex™ SARS-CoV-2 Verification Panel	0505-0129	ORF1a, RdRp, E, N	Positive 1 1 x 3 mL	100,000 copies/mL
	0505-0132	ORF1a, RdRp, E, N, S	Positive 2 1 x 3 mL	10,000 copies/mL
	0505-0168	Full Genome	Positive 3 1 x 3 mL Negative 1 x 3 mL	1,000 copies/mL 5,000 copies/mL (RNase P)

**AccuPlex™ SARS-CoV-2 Reference Material** is designed to measure day-to-day performance of the assay, providing both a positive and a negative reference solution.

Product Description	Material Numbers	Sequence Coverage	Pack Size	Concentration
AccuPlex™ SARS-CoV-2 Reference Material Kit	0505-0126	ORF1a, RdRp, E, N	Positive 5 x 1.5 mL	5,000 copies/mL
	0505-0133	ORF1a, RdRp, E, N, S	Negative 5 x 1.5 mL	5,000 copies/mL (RNase P)
	0505-0159	Full Genome		

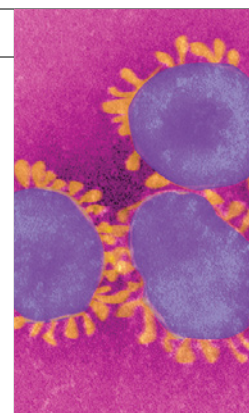
### SARS-CoV-2 AccuPlex solution:

- Non-infectious and replication deficient, enables safe handling in contrast to viral samples
- Fully-extractable with a real viral protein coat; superior to "naked" transcribed RNA
- 2 year stability at 2 - 8°C
- Customizable to sequences of interest to meet unique assay design requirements

**Table 1:** Regions included in AccuPlex SARS-CoV-2 Positive Reference Material.

Region	Version 1	Version 2	Version 3
	Included Nucleotides		Full Genome Coverage
ORF1a	417..1899	417..1899	
	3094..3360	3094..3360	
RdRp	13291..13560	13291..13560	
	14700..15950	14700..15950	
	18577..19051	18577..19051	
S (Spike)	—	21363..26001	
E (Envelope)	25801..28200	25801..28200	
N (Nucleocapsid)	27952..29873	27952..29873	

Numbers refer to sequence of GenBank NC\_045512.2



## ABOUT SERACARE

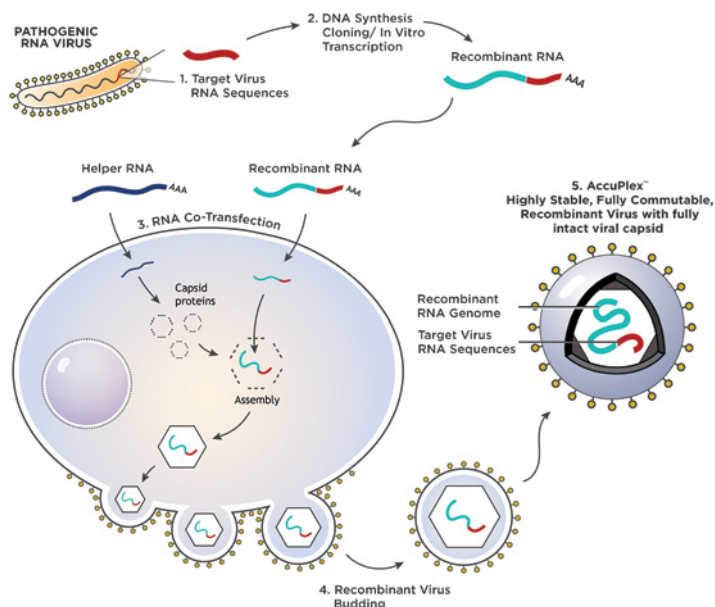
TRUSTED SUPPLIER  
TO DIAGNOSTIC  
MANUFACTURERS AND  
CLINICAL LABS FOR  
OVER 30 YEARS

HIGH-QUALITY  
CONTROL PRODUCTS,  
RAW BIOLOGICAL  
MATERIALS, AND  
IMMUNOASSAY  
REAGENTS

INNOVATIVE TOOLS  
AND TECHNOLOGIES  
TO PROVIDE  
ASSURANCE IN  
DIAGNOSTIC ASSAY  
PERFORMANCE AND  
TEST RESULTS

FOR MORE  
INFORMATION, PLEASE  
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LGC SeraCare's AccuPlex recombinant material serves as a true full process molecular control for your diagnostic assays. Compatible with multiplexed RT-PCR and NGS-based assays, AccuPlex custom recombinant materials are constructed with a replication-deficient mammalian virus, producing a safe, non-infectious material (Figure 1). With a protein coat and lipid bilayer, these mammalian virus-based reference materials resemble the complexity of virus targets found in true patient samples.



**FIGURE 1:** 1) RNA sequence from the pathogenic virus of interest is chosen. 2) DNA synthesis and cloning occur to produce the recombinant RNA. 3) Recombinant RNA and helper RNA are co-transfected into the mammalian cells, allowing the encapsulation of recombined RNA. 4) Exocytosis of the mature enveloped non-infectious and replication deficient RNA virus containing the assay target RNA sequence of interest

## MOST 'PATIENT SAMPLE-LIKE' MATERIAL, EVALUATES ENTIRE WORKFLOW

Unlike RNA-spiked buffer, or technologies that package viral RNA into a bacteriophage, the AccuPlex recombinant closely resembles the wild-type mammalian pathogenic virus. This enables the release of the viral genome at a similar rate to the wild-type virus during the nucleic acid sample preparation process. AccuPlex recombinant material mimics a real patient sample in your workflow, serving as a full-process control for your assay.

## ACCUPLEX SOLVES ASSAY DEVELOPMENT CHALLENGES

If you're developing diagnostics for emerging viral diseases and have the challenge of including safe, non-infectious controls in your test kit, partner with SeraCare's talented R&D team to produce your custom AccuPlex recombinant virus material (DNA or RNA-based). Utilizing your sequences of interest and product specifications, we will develop a custom solution which meets your unique requirements.



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