

## CERTIFICATE OF ANALYSIS

### Product information

Name	SARS-Panel Pseudovirus Standard Reference
Catalog No.	CBV30024
Lot No.	CGD2022112606
Format	Virus
Gene	ORF1ab/RdRP(2795bp)、Gene M(666bp)、Gene N(1207bp)、Gene E(231bp)
Sequence	<p>ORF1ab/RdRP(2795bp):</p> <p>TCTGCGGATGCATCAACGTTTTTAAACGGGTTTGCGGTGTAAGTGCAGCCCGT          CTTACACCGTGCGGCACAGGCACTAGTACTGATGTCGTCTACAGGGCTTTTGA          TATTTACAACGAAAAAGTTGCTGGTTTTGCAAAGTTCCTAAAACTAATTGCT          GTCGCTTCCAGGAGAAGGATGAGGAAGGCAATTTATTAGACTCTTACTTTGTA          GTTAAGAGGCATACTATGTCTAACTACCAACATGAAGAGACTATTTATAACTT          GGTTAAAGATTGTCCAGCGGTTGCTGTCCATGACTTTTTCAAGTTTAGAGTAG          ATGGTGACATGGTACCACATATATCACGTCAGCGTCTAACTAAATACACAATG          GCTGATTTAGTCTATGCTCTACGTCATTTTGATGAGGGTAATTGTGATACATTA          AAAGAAATACTCGTCACATACAATTGCTGTGATGATGATTATTTCAATAAGAA          GGATTGGTATGACTTCGTAGAGAATCCTGACATCTTACGCGTATATGCTAACT          TAGGTGAGCGTGTACGCCAATCATTATTAAGACTGTACAATTCTGCGATGCT          ATGCGTGATGCAGGCATTGTAGGCGTACTGACATTAGATAATCAGGATCTTAA          TGGGAAC TGGTACGATTTCCGGTATTTTCGTACAAGTAGCACCAGGCTGCGGAG          TTCCTATTGTGGATTCAATTA TACTCATTGCTGATGCCCATCTCACTTTGACTA          GGGCATTGGCTGCTGAGTCCCATATGGATGCTGATCTCGAAAACCACTTATT          AAGTGGGATTTGCTGAAATATGATTTTACGGAAGAGAGACTTTGTCTCTTCGA          CCGTTATTTAAATATTGGGACCAGACATACCATCCCAATTGTATTAACTGTTT          GGATGATAGGTGTATCCTTCATTGTGCAAAC TTTAATGTGTTATTTCTACTGT          GTTCCACCTACAAGTTTGGACC ACTAGTAAGAAAAATATTTGTAGATGGTG          TTCCTTTGTGTTTCAACTGGATA ACCATTTTCGTGAGTTAGGAGTCGTACATA          ATCAGGATGTAAACTTACATAGCTCGCGTCTCAGTTTCAAGGAACTTTTAGTG          TAGCTGCTGATCCAGCTATGCATGCAGCTTCTGGCAATTTATTGCTAGATAA          ACGCACTACATGCTTTTCAGTAGCTGCACTAACAACAATGTTGCTTTTCAA          CTGTCAAACCCGGTAATTTAATAAAGACTTTTATGACTTTGCTGTGTCTAAAG          GTTCTTTAAGGAAGGAAGTCTGTTGA ACTAAAACACTTCTTCTTTGCTCAGG          ATGGCAACGCTGCTATCAGTGATTATGACTATTATCGTTATAATCTGCCAACA          ATGTGTGATATCAGACA ACTCCTATTCGTAGTTGAAGTTGTTGATAAATACTTT          GATTGTTACGATGGTGGCTGTATTAATGCCAACCAAGTAATCGTTAACAATCT          GGATAAATCAGCTGGTTTCCATTTAATAAATGGGGTAAGGCTAGACTTTATT          ATGACTCAATGAGTTATGAGGATCAAGATGCACTTTTCGCGTATACTAAGCGT          AATGTCATCCCTACTATAACTCAAATGAATCTTAAGTATGCCATTAGTGCAAAA          GAATAGAGCTCGCACCGTAGCTGGTGTCTCTATCTGTAGTACTATGACAAATA          GACAGTTTCATCAGAAATTATTGAAGTCAATAGCCGCCACTAGAGGAGCTACT          GTGGTAATTGGAACAAGCAAGTTTTACGGTGGCTGGCATAATATGTTAAAAAC          TGTTACAGTGATGTAGAAACTCCACACCTTATGGGTTGGGATTATCCAAAAT          GTGACAGAGCCATGCCTAACATGCTTAGGATAATGGCCTCTCTGTTCTTGCTC          GCAAACATAACACTTGCTGTA ACTTATCACACCGTTTCTACAGGTTAGCTAAC          GAGTGTGCGCAAGTATTAAGTGAGATGGTCATGTGTGGCGGCTCACTATATGT          TAAACCAGGTGGAACATC CCGGTGATGCTACA ACTGCTTATGCTAATAGTG          TCTTAAACATTTGTCAAGCTGTTACAGCCAATGTA AATGCACTTCTTTCAACTG          ATGGTAATAAGATAGCTGACAAGTATGTCCGCAATCTACAACACAGGCTCTAT          GAGTGTCTCTATAGAAATAGGGATGTTGATCATGAATTCGTGGATGAGTTTAA          CGCTTACCTGCGTAAACATTTCTCCATGATGATTCTTCTGATGATGCCGTTGT          GTGCTATAACAGTAACTATGCGGCTCAAGGTTTAGTAGCTAGCATTAAGAACT</p>

TTAAGGCAGTTCCTTTATTATCAAAAATAATGTGTTTCATGTCTGAGGCCAAAATGTT  
GGACTGAGACTGACCTTACTAAAGGACCTCACGAATTTTGCTCACAGCATA  
ATGCTAGTTA  
AACAAAGGAGATGATTACGTGTACCTGCCTTACCAGATCCATCAAGAATATTA  
GGCGCAGGCTGTTTTGTCGATGATATTGTCAAAACAGATGGTACACTTATGAT  
TGAAAGGTTTCGTGTCACCTGGCTATTGATGCTTACCCACTTACAAAACATCCTA  
ATCAGGAGTATGCTGATGTCTTTCACCTGTATTTACAATACATTAGAAAGTTAC  
ATGATGAGCTTACTGGCCACATGTTGGACATGTATTCCGTAATGCTAACTAAT  
GATAACACCTCACGGTACTGGGAACCTGAGTTTTATGAGGCTATGTACACACC  
ACATACAGTCTTGACG

**Gene M(666bp):**

ATGGCAGACAACGGTACTATTACCGTTGAGGAGCTTAAACAACCTCCTGGAAC  
AATGGAACCTAGTAATAGGTTTCCTATTCCCTAGCCTGGATTATGTTACTACAAT  
TTGCCTATTCTAATCGGAACAGGTTTTGTACATAATAAAGCTGTTTTCCCTCT  
GGCTCTTGTTGGCCAGTAACACTTGCTTGTGTTTTGCTTGCTGCTACAGAA  
TTAATTGGGTGACTGGCGGGATTGCGATTGCAATGGCTTGTATTGTAGGCTTG  
ATGTGGCTTAGCTACTTCGTTGCTTCCTTCAGGCTGTTTGCTCGTACCCGCTCA  
ATGTGGTCATTCAACCCAGAAACAAACATTCTTCTCAATGTGCCTCTCCGGGG  
GACAATTGTGACCAGACCGCTCATGGAAAAGTGAACCTGTGCTATTGGTGTGTA  
TCATTCGTGGTCACTTGCGAATGGCCGGACACTCCCTAGGGCGCTGTGACATT  
AAGGACCTGCCAAAAGAGATCACTGTGGCTACATCACGAACGCTTTCTTATTA  
CAAATTAGGAGCGTCGACGCTGTAGGCCTGATTACAGTTTTGCTGCATACA  
ACCGCTACCGTATTGGAACTATAAATTAATACAGACCACGCCGGTAGCAA  
CGACAATATTGCTTTGCTAGTACAGTAA

**Gene N(1207bp):**

ATGTCTGATAATGGACCCCAATCAAACCAACGTAGTGCCCCCGCATTACATT  
TGGTGGACCCACAGATTCAACTGACAATAACCAGAATGGAGGACGCAATGGG  
GCAAGGCCAAAACAGCGCCGACCCCAAGGTTTACCCAATAATACTGCGTCTTG  
GTTACAGCTCTCACTCAGCATGGCAAGGAGGAACTAGATTCCCTCGAGGACC  
AGGGCGTTCCAATCAACACCAATAGTGGTCCAGATGACCAAATTGGCTACTAC  
CGAAGAGCTACCCGACGAGTTCGTGGTGGTGACGGCAAAATGAAAGAGCTCA  
GCCCCAGATGGTACTTCTATTACCTAGGAACTGGCCCAGAAGCTTCACTTCCC  
TACGGCGCTAACAAAGAAGGCATCGTATGGGTTGCAACTGAGGGAGCCTTGA  
ATACCCCAAAGACCACATTGGCACCCGCAATCCTAATAACAATGCTGCCACC  
GTGCTACAACCTCCTCAAGGAACAACATTGCCAAAAGGCTTCTACGCAGAGG  
GAAGCAGAGGCGGCAGTCAAGCCTTCTCGTCTCTATCAGTACGTCGCGGT  
AATTCAAGAAATTCAACTCCTGGCAGCAGTAGGGGAAATTCCTCGTCTCGAAT  
GGCTAGCGGAGGTGGTGAAGTGCCTCGCGCTATTGCTGCTAGACAGATTGA  
ACCAGCTTGAGAGCAAAGTTTCTGGTAAAGGCCAACAACAAGGCCAAAC  
TGCTACTAAGAAATCTGCTGCTGAGGCATCTAAAAAGCCTCGCCAAAACGTA  
CTGCCACAAAACAGTACAACGTCCTCAAGCATTGAGGAGACGTGGTCCAGA  
ACAAACCCAAGGAAATTTCCGGGGACCAAGACCTAATCAGACAAGGAACTGAT  
TACAAACATTGGCCGCAAATTTGCACAATTTGCTCCAAGTGCCTCTGCATTCTTT  
GGAATGTCACGCATTGGCATGGAAGTACACCTTCGGGAACATGGTCACTTA  
TCATGGAGCCATTAATTTGGATGACAAAAGATCCACAATTCAAAGACAACGTC  
ATACTGCTGAACAAGCACATTGACGCATACAAAACATTTCCACCAACAGAGC  
CTAAAAGGACAAAAGAAAAGACTGATGAAGCTCAGCCTTTGCCGAGAG  
ACAAAAGAAGCAGCCCACTGTGACTCTTCTTCTGCGGCTGACATGGATGATT  
TCTCCAGACAACCTCAAATTTCCATGAGTGGAGCTTCTGCTGATTCAACTCAG  
GCATAA

**Gene E(231bp):**

ATGTAATCATTGTTTCGGAAGAAACAGGTACGTTAATAGTTAATAGCGTACT  
TCTTTTCTTGCTTTTCGTGGTATTCTTGCTAGTCACACTAGCCATCCTTACTGCG  
CTTCGATTGTGTGCGTACTGCTGCAATATTGTTAACGTGAGTTTAGTAAAACC  
AACGGTTTACGTCTACTCGCGTGTAAAAATCTGAACTCTTCTGAAGGAGT

NCBI No.	NC 004718.3
Buffer	1xPBS
Storage Conditions	-80°C
Date of Manufacture	Nov.-26-2022
Expiry	12 months from the date of manufacture


## Quality Control

Test Items	Standard	Results	Passed
Quantity	1 mL/vial*1 vial	1 mL/vial*1 vial	√
ORF1ab Copy Number	>1x10 <sup>7</sup> copies/mL (DdPCR)	>1.12x10 <sup>7</sup> copies/ml	√
Gene N Copy Number	>1x10 <sup>7</sup> copies/mL (DdPCR)	>2.5x10 <sup>7</sup> copies/ml	√
Gene E Copy Number	>1x10 <sup>7</sup> copies/mL (DdPCR)	>1.77x10 <sup>7</sup> copies/ml	√
Gene M Copy Number	>1x10 <sup>7</sup> copies/mL (DdPCR)	>1.02x10 <sup>7</sup> copies/ml	√
DNA Residue	<1% (DdPCR)	0.92% ( ORF1ab/RdRP) 0.81% ( Gene N) 0.68% ( Gene E) 0.32%( Gene M)	√

### Caution:

For research use only.

If you have any questions about the Certificate of Analysis, please contact us.

Certified by:  Date:\*\*\*\*

 Date:\*\*\*\*