CERTIFICATE OF ANALYSIS

Product information

Name	2019-nCoV-Panel Pseudovirus Standard Reference
Catalog No.	CBV30023
Lot No.	CBFA23083001X
Format	Virus
Gene	Gene N, Gene E, ORF1ab/RdRP
Sequence	Gene N (1260bp): ATGTCTGATAATGGACCCCAAAATCAGCGAAATGCACCCCGCATT ACGTTTGGTGGACCCTCAGATTCAACTGGCAGTAACCAGAATGGA GAACGCAGTGGGGCGCGATCAAAACAACGTCGGCCCCAAGGTTTA CCCAATAATACTGCGTCTTGGTTCACCGCTCTCACTCAACATGGCA AGGAAGACCTTAAATTCCCTCGAGGACAAGGCGTTCCAATTAACA CCAATAGCAGTCCAGATGACCAAATTGGCTACTACCGAAGAGCTA CCAGACGAATTCGTGGTGGTGACGGTAAAATGAAAGATCTCAGTC CAAGATGGTATTTCTACTACCTAGGAACTGGGCCAGAAGCTGGAC TTCCCTATGGTGCTAACAAAGACGGCATCATATGGGTTGCAACTG AGGGAGCCTTGAATACACCAAAAGATCACATTGGCACCCGCAATC CTGCTAACAATGCTGCAATCGTGCTACAACTTCCTCAAGGAACAA CATTGCCAAAAGGCTTCTACGCAGAAGGGAGCAGAGGCGGCAGT CAAGCCTCTTCTCGTTCCTCATCACGTAGTCGCAACAGTTCAAGAA ATTCAACTCCAGGCAGCAGTAGGGGAACTTCTCCTGCTAGAATGG CTGGCAATGGCGGTGATGCTGCTCTTGCTTTGCTGCTGCTTGACAG ATTGAACCAGCTTGAGAGCAAAATGTCTGGTAAAGGCCAACAACA ACAAGGCCAAACTGTCACTAAGAAATCTGCTGCTGAGGCTTCTAA GAAGCCTCGGCAAAAACGTACTGCCACTAAAGCATACAATGTAAC ACAAGCTTTCGGCAGACGTGGTCCAGAACAAACCCAAGGAAATTT TGGGGACCAGGAACTAATCAGACAAGGAACTGATTACAAACATTG GCCGCAAATTGCACAATTTGCCCCCAGCGCTTCAGCGTTCTTCGGA ATGTCGCGCATTGGCATGGAAGTCACACCTTCGGGAACGTGGTTG ACCTACACAGGTGCCATCAAATTGGATGACAAAGATCCAAATTTC AAAGATCAAGTCATTTTGCTGAATAAGCATATTGACGCATACAAA ACATTCCCACCAACAGAGCCTAAAAAGGACAAAAAGAAGAAGGC TGATGAAACTCAAGCCTTACCGCAGAGACAGAAGAAACAGCAAA CTGTGACTCTTCTTCCTGCTGCAGATTTGGATGATTTCTCCAAACA ATTGCAACAATCCATGAGCAGTGCTGACTCAACTCAGGCCTAA Gene E (228bp): ATGTACTCATTCGTTTCGGAAGAGACAGGTACGTTAATAGTTAAT AGCGTACTTCTTTTTCTTGCTTTCGTGGTATTCTTGCTAGTTACACT AGCCATCCTTACTGCGCTTCGATTGTGTGCGTACTGCTGCAATATT GTTAACGTGAGTCTTGTAAAACCTTCTTTTTACGTTTACTCTCGTGT TAAAAATCTGAATTCTTCTAGAGTTCCTGATCTTCTGGTCTAA ORF1ab/RdRP (2995bp): GTTGTCTGTACTGCCGTTGCCACATAGATCATCCAAATCCTAAAGG ATTTTGTGACTTAAAAGGTAAGTATGTACAAATACCTACAACTTGT GCTAATGACCCTGTGGGTTTTACACTTAAAAACACAGTCTGTACCG TCTGCGGTATGTGGAAAGGTTATGGCTGTAGTTGTGATCAACTCCG

CGAACCCATGCTTCAGTCAGCTGATGCACAATCGTTTTTAAACGG
GTTTGCGGTGTAAGTGCAGCCCGTCTTACACCGTGCGGCACAGGC
ACTAGTACTGATGTCGTATACAGGGCTTTTGACATCTACAATGATA
AAGTAGCTGGTTTTGCTAAATTCCTAAAAACTAATTGTTGTCGCTT
CCAAGAAAAGGACGAAGATGACAATTTAATTGATTCTTACTTTGT
AGTTAAGAGACACACTTTCTCTAACTACCAACATGAAGAAACAAT
TTATAATTTACTTAAGGATTGTCCAGCTGTTGCTAAACATGACTTC
TTTAAGTTTAGAATAGACGGTGACATGGTACCACATATATCACGT
CAACGTCTTACTAAATACACAATGGCAGACCTCGTCTATGCTTTAA
GGCATTTTGATGAAGGTAATTGTGACACATTAAAAGAAATACTTG
TCACATACAATTGTTGTGATGATGATTATTTCAATAAAAAGGACTG
GTATGATTTTGTAGAAAACCCAGATATATTACGCGTATACGCCAA
CTTAGGTGAACGTGTACGCCAAGCTTTGTTAAAAACAGTACAATT
CTGTGATGCCATGCGAAATGCTGGTATTGTTGGTGTACTGACATTA
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TACAAACCACGCCAGGTAGTGGAGTTCCTGTTGTAGATTCTTATTA
TTCATTGTTAATGCCTATATTAACCTTGACCAGGGCTTTAACTGCA
GAGTCACATGTTGACACTGACTTAACAAAGCCTTACATTAAGTGG
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GACCGTTATTTTAAATATTGGGATCAGACATACCACCCAAATTGTG
TTAACTGTTTGGATGACAGATGCATTCTGCATTGTGCAAACTTTAA
TGTTTTATTCTCTACAGTGTTCCCACCTACAAGTTTTGGACCACTA
GTGAGAAAAATATTTGTTGATGGTGTTCCATTTGTAGTTTCAACTG
GATACCACTTCAGAGAGCTAGGTGTTGTACATAATCAGGATGTAA
ACTTACATAGCTCTAGACTTAGTTTTAAGGAATTACTTGTGTATGC
TGCTGACCCTGCTATGCACGCTGCTTCTGGTAATCTATTACTAGAT
AAACGCACTACGTGCTTTTCAGTAGCTGCACTTACTAACAATGTTG
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ATTATGACTACTATCGTTATAATCTACCAACAATGTGTGATATCAG
ACAACTACTATTTGTAGTTGAAGTTGTTGATAAGTACTTTGATTGT
TACGATGGTGGCTGTATTAATGCTAACCAAGTCATCGTCAACAAC
CTAGACAAATCAGCTGGTTTTCCATTTAATAAATGGGGTAAGGCT
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TCGCATATACAAAACGTAATGTCATCCCTACTATAACTCAAATGA
ATCTTAAGTATGCCATTAGTGCAAAGAATAGAGCTCGCACCGTAG
CTGGTGTCTCTATCTGTAGTACTATGACCAATAGACAGTTTCATCA
AAAATTATTGAAATCAATAGCCGCCACTAGAGGAGCTACTGTAGT
AATTGGAACAAGCAAATTCTATGGTGGTTGGCACAACATGTTAAA
AACTGTTTATAGTGATGTAGAAAACCCTCACCTTATGGGTTGGGAT
TATCCTAAATGTGATAGAGCCATGCCTAACATGCTTAGAATTATG
GCCTCACTTGTTCTTGCTCGCAAACATACAACGTGTTGTAGCTTGT
CACACCGTTTCTATAGATTAGCTAATGAGTGTGCTCAAGTATTGAG
TGAAATGGTCATGTGTGGCGGTTCACTATATGTTAAACCAGGTGG
AACCTCATCAGGAGATGCCACAACTGCTTATGCTAATAGTGTTTTT
AACATTTGTCAAGCTGTCACGGCCAATGTTAATGCACTTTTATCTA
CTGATGGTAACAAAATTGCCGATAAGTATGTCCGCAATTTACAAC
ACAGACTTTATGAGTGTCTCTATAGAAATAGAGATGTTGACACAG
ACTTTGTGAATGAGTTTTACGCATATTTGCGTAAACATTTCTCAAT
GATGATACTCTCTGACGATGCTGTTGTGTGTTTCAATAGCACTTAT

	GCATCTCAAGGTCTAGTGGCTAGCATAAAGAACTTTAAGTCAGTTCTTTATTATCAAAACAATGTTTTTATGTCTGAAGCAAAATGTTGGACTGAGACTGACCTTACTAAAGGACCTCATGAATTTTGCTCTCAACATACAATGCTAGTTAAACAGGGTGATGATTATGTGTACCTTCCTTACCCAGATCCATCAAGAATCCTAGGGGCCGGCTGTTTTGTAGATGATATCGTAAAAACAGATGGTACACTTATGATTGAACGGTTCGTGTCTTTAGCTATAGATGCTTACCCACTTACTAAACATCCTAATCAGGAGTATGCTGATGTCTTTCATTTGTACTTACAATACATAAGAAAGCTACATGATGAGTTAACAGGACACATGTTAGACATGTATTCTGTTATGCTTACTAATGATAACACTTCAAGGTATTGGGAACCTGAGTTTTATGAGGCTATGTACACACCGCATACAGTCTTACAG
NCBI No.	NC_045512.2
Buffer	1xPBS
Storage Conditions	-80°C
Date of Manufacture	2023/08/30
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	√
N Copy Number	>1x10e7 copies/mL (DdPCR)	1.82x10e7 copies/mL	√
E Copy Number	>1x10e7 copies/mL (DdPCR)	2.20x10e7 copies/mL	√
ORF1ab/RdRP Copy Number	>1x10e7 copies/mL (DdPCR)	1.39x10e7 copies/mL	√
DNA Residue	<1% (DdPCR)	0.86% (ORF1ab/RdRP) 0.79% (Gene N) 0.91% (Gene E)	√

Caution:
For research use only.
If you have any questions about the Certificate of Analysis, please contact us.

Certified by: Date:****

Date:****