





TCATGGCCACTATTTCTGACGACCCGCTTCTAGAAAGTGAACCTGTAATCGGAGCTGTGATCCTTGTGGACACTTCTGTAATTTGCTGGACACCATTAGGACGCTGTGACATCAAGGACCTGCCTAAAGAAATCACTGTTGCTACATCACGAAACGCTTCTT  
 ATTACAATTTGGGACCTTCGCACGCTGTAGCAGGTGACTCAGGTTTGTGTCATACAGCTGTACAGGATGGCAACTATAAATTAACACAGACCATTCAGTAGCAGTGACAAATTTGCTTGTGTCACAGTAAGTGACAAACAGATGTTTCATCTCGTT  
 GACTTTCAGGTTACTATAGCAGAGATATTACTAATTATTATGAGGACTTTAAAGTTCCATTGGAATCTGATTACATCAATAAACCTCATAATTAATAAATTTATCTAAAGTCACTAACTAGAGATAAATTTCTCAATTTAGATGAAGAGCAACCAATGGAG  
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 ATATGAAACTTGTACAGCCTAAACGACATGAAATTTCTGTTTCTTAGGAATCATCAAACTGTAGCTGATTTCCACCAGAAATGTAGTTTACAGTCACTCAACATCAACCAATAGTAGTGTGATGACCCGCTCTTCACTTCTATTTCTAAAT  
 GGTATATTAGGTAGGACTAGAAATCAGCACTTTAATGAAATGCTGCTGATGAGGCTGTCTAAATCAACCAATTCAGTACATGATTCGGTAATATACAGTTTCTGTTTACCTTTTACAAATTAATTCAGGAACTAAATTTGGTACTGTG  
 TAGTGGCTTGTCTTATAGAGACTTTTAGAGTATCATGACGTTCTGCTGTTTGTAGATTCACTAAACGAACTAAATTTCTGATTAATGGACCCAAATTCAGCGAAATGCAACCCGCTTACGTTTGGTGGACCTCAGATTCAACTGGCAG  
 TAACCAGATTTGGAAACGAGTGGGGCGGATCAAAAACAACCTCGGCCCAAGGTTTACCCAAATAACTGCTGCTTGGTTCCCGCTTCACTCAACATGGCAAGGAACTTAAATTCCTCGAGGCAAGGCTTCCCAATTAACCAATAGCAGTCC  
 AGATGACAAATTTGGCTACTCCAGGAAAGTACCAGACAAATCGTGGTGGTACGGTAAATGAAAGATCTCAGTCCAAGATGGTATTTCTACTACCTAGGAACTGGCCAGAACTGACTTCCCTATGTTGCTAACAAAGCCGATCATATGGGTTC  
 AACTGAGGGAGCCTTGAATACACCAAAAGATCAATTTGGCACCAGCAATCTGTCAACAATGCTGCAATCTGCTACAACTTCTCAAGGAACAACATTTGCCAAAGGCTTCTACGAGAAGGAGCAGAGCCGCGAGTCAAGCCTTCTCTGTTCTCTCATC  
 ACGTAGTCGCACAGTTCAGAAATTCACCTCCAGGCAGAGTAGGGAACTTCTCTGCTAGAATGGCTGGCAATGGCGGTGATGCTGCTTGTCTTGTGCTGCTTACAGATTGAACAGCTTGAAGCAAAATGCTGTTAAAGGCCAACCAACA  
 AGGCCAACTGTCACTAAGAAATCTGCTGCTGAGGCTTCTAAGAGCCTCGGCAAAACGCTACTGCCACTAAGCATACAATGTAACACAAGCTTTCCGACAGCTGGTCCAGAACAAACCAAGGAATTTTGGGACCAAGGAATTAATCAGACAAGAAC  
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 TGAATAATTAATTTAGTAGTCTATCCCATGTGATTTAATAGTCTTCTAGGAGATGACAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

Variant table of passage 3 (#100999, lot 26102020)

In blue are variants present in the sequence provided by the depositor.

Details about the sequencing protocol is available on request.

Position (NC_045512.2)	Ref	Alt	SNP/indel	Syn/NonSyn	Proportion	Gene
241	C	T	SNP	N/A	0.9992	CHR_START-ORF1ab
2497	A	G	SNP	Syn	0.0753	ORF1ab
3037	C	T	SNP	Syn	0.9989	ORF1ab
3082	A	G	SNP	Syn	0.0770	ORF1ab
6696	C	CT	insertion	N/A	0.0490	ORF1ab
9360	C	T	SNP	Thr-->Ile	0.0364	ORF1ab
9502	C	T	SNP	Syn	0.0110	ORF1ab
14408	C	T	SNP	Pro-->Leu	0.9995	ORF1ab
16389	T	A	SNP	Asn-->Lys	0.2212	ORF1ab
19724	T	C	SNP	Val-->Ala	0.9995	ORF1ab
19983	C	T	SNP	Syn	0.0119	ORF1ab
20011	G	A	SNP	Val-->Ile	0.0202	ORF1ab
22205	G	C	SNP	Asp-->His	0.0380	S
22879	C	A	SNP	Asn-->Lys	0.9992	S
23403	A	G	SNP	Asp-->Gly	0.9994	S
23525	C	T	SNP	His-->Tyr	0.0943	S
23582	TATCAGACTCAGACTA	T	deletion	N/A	0.0594	S
23607	G	A	SNP	Arg-->Gln	0.0338	S
23607	G	C	SNP	Arg-->Pro	0.0134	S
23607	G	T	SNP	Arg-->Leu	0.0733	S
24538	A	C	SNP	Gln-->His	0.0490	S
26204	C	T	SNP	Thr-->Ile	0.0680	ORF3a
26258	T	C	SNP	Val-->Ala	0.2813	E
29573	G	T	SNP	Val-->Phe	0.9928	E

**DEPOSITOR** Original virus (passage 2) received from Prof Arvind Patel, The MRC-University of Glasgow Centre for Virus Research, The University of Glasgow. Passage 3 virus grown by CFAR

**REFERENCE** Rihn *et al.* A plasmid DNA-launched SARS-CoV-2 reverse genetics system and coronavirus toolkit for COVID-19 research. PLOS Biology, 2021.  
<https://journals.plos.org/plosbiology/article?id=10.1371/journal.pbio.3001091>

**ACKNOWLEDGEMENTS** The acknowledgment should read: "The [*Insert reagent name*] was provided by the NIBSC Research Reagent Repository, UK. With thanks to [*Insert Depositor*]."

Please also ensure that you send us a copy of any papers resulting from work using reagents acquired through CFAR, this can be by e-mail or printed copy.



<b>Physical properties (at room temperature)</b>	
Physical appearance	Yellow/Pink, liquid
Fire hazard	None
<b>Chemical properties</b>	
Stable	Yes
Corrosive:	No
Hygroscopic	No
Oxidising:	No
Flammable	No
Irritant:	No
Other: Live SARS-CoV-2. It is the responsibility of the end user to seek local biosafety approval for the storage and handling of the material in their workplace	
Handling: CAUTION - This preparation is not for administration to humans or animals in the human food chain. This preparation is hazardous to health. It should be used and discarded according to your own laboratory's safety procedures. Such safety procedures should include the wearing of protective clothing, gloves and use within ACDP3 or higher facility.	
<b>Toxicological properties</b>	
Effects of inhalation:	Likelihood of Coronavirus infection
Effects of ingestion:	Not established, avoid ingestion
Effects of skin absorption:	Not established, avoid contact with skin
<b>Suggested First Aid</b>	
Inhalation	Seek medical advice
Ingestion	Seek medical advice
Contact with eyes	Wash with copious amounts of water. Seek medical advice.
Contact with skin	Wash thoroughly with water.
<b>Action on Spillage and Method of Disposal</b>	

Spillage of contents should be taken up with absorbent material wetted with an appropriate virucidal agent. Rinse area with an appropriate virucidal agent followed by water.

Absorbent materials used to treat spillage should be treated as biologically hazardous waste.

## **MATERIAL SAFETY SHEET**