

Supplementary Tables

Table 1: Sequences of the antisense oligonucleotides (ASOs) targeting the 2,924 nt segment of SARS-CoV-2 RNA.

Group	ASO	Sequence
1	1	GGCAGCACAAAGACATCTGTCGTAGTGCAACAGGACTAAGC-TCATTATT
	2	TGTAGTAAGCTAACGCATTGTCATCAGTGCAAGCAGTTTGT-GTAGTACC
	3	TGTAAATCGGATAACAGTGCAAGTACAAACCTACCTCCCTT-TGTTGTGT
	4	GATAGTACCAGTTCCATCACTCTTAGGGAATCTAGCCCATT-TCAAATCC
	5	CTTTAGGTGTGTCTGTAACAAACCTACAAGGTGGTTCCAGT-TCTGTATA
2	1	ATACCTCTATTTAGGTTGTTTAATCCTTTAATAAAGTATAAA-TACTTCACTTTAGGAC
	2	CACTTCTGTTGCATTACCAGCTTGTAGACGTACTGTGGCAG-CTAAACTACCAAGTACC
	3	AAGCTTTAGCAGCATCTACAGCAAAAGCACAGAAAGATAA-TACAGTTGAATTGGCAGG
	4	CACAACATCTTAACACAATTAGTGATTGGTTGTCCCCCACT-AGCTAGATAATCTTTGT
3	1	GATCCATATTGGCTTCCGGTGTAAGTGTATTGCCTGACCA-GTACCAGTGTGTGTA
	2	ATGATCTATGTGGCAACGGCAGTACAGACAACACGATGCA-CCACCAAAGGATTCTT

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Table 1: Sequences of the antisense oligonucleotides (ASOs) targeting the 2,924 nt segment of SARS-CoV-2 RNA. (Continued)

	3	GTTGTAGGTATTTGTACATACTTACCTTTTAAGTCACAAAAT- CCTTTAGGATTTGG
	4	CCGCAGACGGTACAGACTGTGTTTTTAAGTGTAACCCAC- AGGGTCATTAGCACAA
4	1	CTGAAGCATGGGTTCGCGGAGTTGATCACAACCTACAGCCA- TAACCTTTCCACATA
	2	AAGACGGGCTGCACTTACACCGCAAACCCGTTTAAAAACG- ATTGTGCATCAGCTGA
	3	TAGATGTCAAAAGCCCTGTATACGACATCAGTACTAGTGCC- TGTGCCGCACGGTGT
	4	GGAAGCGACAACAATTAGTTTTTAGGAATTTAGCAAAACCA- GCTACTTTATCATTG
5	1	TGTCTCTTAACCTACAAAGTAAGAATCAATTAAATTGTCATCT- TCGTCCTTTTCTT
	2	GACAATCCTTAAGTAAATTATAAATTGTTTCTTCATGTTGGT- AGTTAGAGAAAGTG
	3	GGTACCATGTCACCGTCTATTCTAACTTAAAGAAGTCATG- TTTAGCAACAGCTG
	4	AAGCATAGACGAGGTCTGCCATTGTGTATTTAGTAAGACGT- TGACGTGATATATGT
6	1	TGTATGTGACAAGTATTTCTTTTAATGTGTCACAATTACCTT- CATCAAAATGCCTTA
	2	GGTTTTCTACAAAATCATACCAGTCCTTTTTATTGAAATAAT- CATCATCACACAAT

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Table 1: Sequences of the antisense oligonucleotides (ASOs) targeting the 2,924 nt segment of SARS-CoV-2 RNA. (Continued)

	3	TTAACAAAGCTTGGCGTACACGTTACCTAAGTTGGCGTAT- ACGCGTAATATATCTG
	4	ATGTCAGTACACCAACAATACCAGCATTTTCGCATGGCATCA- CAGAATTGTACTGTTT
7	1	GTTTGTATGAAATCACCGAAATCATACCAGTTACCATTGAG- ATCTTGATTATCTA
	2	TAGGCATTAACAATGAATAATAAGAATCTACAACAGGAACT- CCACTACCTGGCGTG
	3	GTAAAGTCAGTGTCAACATGTGACTCTGCAGTTAAAGCCCT- GGTCAAGGTTAATA
	4	TTAACCTCTCTTCCGTGAAGTCATATTTTAACAAATCCCACT- TAATGTAAGGCTTT
8	1	AACACAATTTGGGTGGTATGTCTGATCCCAATATTTAAAAT- AACGGTCAAAGAGTT
	2	GAGAATAAAACATTAAAGTTTGCACAATGCAGAATGCATCT- GTCATCCAAACAGTT
	3	CATCAACAAATATTTTTCTCACTAGTGGTCCAAAACCTTGTA- GGTGGGAACACTGTA
	4	ATGTACAACACCTAGCTCTCTGAAGTGGTATCCAGTTGAAA- CTACAAATGGAACAC
9	1	TACACAAGTAATTCCTTAAAACTAAGTCTAGAGCTATGTAA- GTTTACATCCTGATT
	2	TGCGTTTATCTAGTAATAGATTACCAGAAGCAGCGTGCATA- GCAGGGTCAGCAGCA

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Table 1: Sequences of the antisense oligonucleotides (ASOs) targeting the 2,924 nt segment of SARS-CoV-2 RNA. (Continued)

	3	TTTGACAGTTTGAAAAGCAACATTGTTAGTAAGTGCAGCTA- CTGAAAAGCACGTAG
	4	CTTAAAGAAACCCTTAGACACAGCAAAGTCATAGAAGTCTT- TGTTAAAATTACCGGG
10	1	CAGCATTACCATCCTGAGCAAAGAAGAAGTGTTTTAATTCA- ACAGAACTTCCTTC
	2	CTGATATCACACATTGTTGGTAGATTATAACGATAGTAGTC- ATAATCGCTGATAG
	3	ACCATCGTAACAATCAAAGTACTTATCAACAACTTCAACTA- CAAATAGTAGTTGT
	4	AACCAGCTGATTTGTCTAGGTTGTTGACGATGACTTGGTTA- GCATTAATACAGCC
11	1	CCTCATAACTCATTGAATCATAATAAAGTCTAGCCTTACCC- CATTTATTAAATGGAA
	2	ATTTGAGTTATAGTAGGGATGACATTACGTTTTGTATATGC- GAAAAGTGCATCTTGAT
	3	GAGACACCAGCTACGGTGCGAGCTCTATTCTTTGCACTAAT- GGCATACTTAAGATTC
	4	GGCTATTGATTTCAATAATTTTTGATGAAACTGTCTATTGGT- CATAGTACTACAGATA
12	1	CAACCACCATAGAATTTGCTTGTTCCAATTACTACAGTAGC- TCCTCTAGTGGC
	2	CCATAAGGTGAGGGTTTTCTACATCACTATAAACAGTTTTT- AACATGTTGTGC

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Table 1: Sequences of the antisense oligonucleotides (ASOs) targeting the 2,924 nt segment of SARS-CoV-2 RNA. (Continued)

	3	CATAATTCTAAGCATGTTAGGCATGGCTCTATCACATTTAG-GATAATCCCAAC
	4	ACGGTGTGACAAGCTACAACACGTTGTATGTTTGCGAGCA-AGAACAAGTGAGGC
13	1	ACACATGACCATTTCCTCAATACTTGAGCACACTCATTAG-CTAATCTATAGAA
	2	AGTTGTGGCATCTCCTGATGAGGTTCCACCTGGTTTAACAT-ATAGTGAACCGCC
	3	ATTAACATTGGCCGTGACAGCTTGACAAATGTTAAAAACAC-TATTAGCATAAGC
	4	TAAATTGCGGACATACTTATCGGCAATTTTGTTACCATCAG-TAGATAAAAGTGC

Table 2: Sequences of the forward (F) and reverse (R) primers for amplifying the target site of each ASO group in the 2,924 nt segment of SARS-CoV-2 RNA.

Group	Primer	Sequence
1	F	AATAATGAGCTTAGTCCTGTTGCACTACG
	R	AGGTTGTTTAATCCTTTAATAAAGTATAAATACTTCACTTT- AGG
2	F	ACCTTG TAGGTTTGTTACAGACACACCTAA
	R	TTGCCTGACCAGTACCAGTGTGTG
3	F	GGACAACCAATCACTAATTGTGTTAAGATGTTG
	R	TCACA ACTACAGCCATAACCTTTCCACA
4	F	CTTAAAAACACAGTCTGTACCGTCTGC
	R	GTAAGAATCAATTAAATTGTCATCTTCGTCCTTTTC
5	F	TGCTAAATTCCTAAAACTAATTGTTGTCGCTT
	R	ATGTGTCACAATTACCTTCATCAAAATGCCT
6	F	CAATGGCAGACCTCGTCTATGC
	R	GAAATCATACCAGTTACCATTGAGATCTTGATTATC
7	F	CGAAATGCTGGTATTGTTGGTGTACTGAC
	R	GTCTGATCCCAATATTTAAAATAACGGTCAAAGAG
8	F	TGTTAAAATATGACTTCACGGAAGAGAGGTT
	R	AAGTCTAGAGCTATGTAAGTTTACATCCTGA
9	F	CCACTTCAGAGAGCTAGGTGTTGTAC
	R	CAAAGAAGAAGTGTTTTAATTCAACAGAACTTCCT
10	F	TGACTTTGCTGTGTCTAAGGGTTTCTTTA
	R	CATAATAAAGTCTAGCCTTACCCCATTTATTAAATGG
11	F	CGTCAACAACCTAGACAAATCAGCTGG

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Table 2: Sequences of the forward (F) and reverse (R) primers for amplifying the target site of each ASO group in the 2,924 nt segment of SARS-CoV-2 RNA. (Continued)

	R	TTCCAATTACTACAGTAGCTCCTCTAGTG
12	F	GACCAATAGACAGTTTCATCAAAAATTATTGAAATCAATA- G
	R	ATACTTGAGCACACTCATTAGCTAATCTATAG
13	F	ACAACGTGTTGTAGCTTGTCACACC
	R	TAAATTGCGGACATACTTATCGGCAATTTTG

Table 3: Sequences of the antisense oligonucleotides (ASOs) targeting the 1,799 nt segment of SARS-CoV-2 genomic RNA. A plus sign (+) indicates that the following nucleotide is locked nucleic acid (LNA).

ASO	Sequence
Anti-LS1	GTAATTC+CTTAAAA+CTAAG
Anti-LS2a	TGAAA+AGCAA+CATTGTT
Anti-LS2b	TA+CCGGGTTTGACAG
Anti-LS3b	A+CCCTTAGACACAGCA
Anti-AS1	TGGGTTCGCG+GAGTTG
Anti-PS2-overlap	GT+TAAAATTA+CCG+GG

Table 4: Sequences of the forward (F), forward with T7 promoter (F+T7), and reverse (R) primers for amplifying the short segment of each 1,799 nt segment of coronaviral RNAs.

Coronavirus	Primer	Sequence
Bat Coronavirus 1A	F	GGACCCTATACGGTTTTGTCT-TGAAAA
	F+T7	TAATACGACTCACTATAGGAC-CCTATACGGTTTTGTCTTGAA-AA
	R	TTTTACAATAAAGAAAGCATC-ATGCTT
Bat Coronavirus BM48-31	F	GGGTTTTATTCTTAGAAACAC-AGTCTG
	F+T7	TAATACGACTCACTATAGGGT-TTTATTCTTAGAAACACAGTC-TG
	R	GGAGTCTAATAAGTTGCCCTC-TTCATC
Common Moorhen Coronavirus	F	GGATAAAGATAAGGAACCTG-TTCTTT
	F+T7	TAATACGACTCACTATAGGAT-AAAGATAAGGAACCTGTTTCT-TT
	R	ACTATTAGGTATTGGCAAATT-AATGCG
Human Coronavirus OC43	F	GGCTGTGTCTTATGTTTTGAC-ACATGA

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Table 4: Sequences of the forward (F), forward with T7 promoter (F+T7), and reverse (R) primers for amplifying the short segment of each 1,799 nt segment of coronaviral RNAs. (Continued)

Infectious Bronchitis Virus	F+T7	TAATACGACTCACTATAGGCT- GTGTCTTATGTTTTGACACAT- GA
	R	ATCTAATTTATCACCGTTCTC- ATCAAC
	F	GGTTTGCACTGTTTGCCAGTG- TTGGAT
MERS Coronavirus	F+T7	TAATACGACTCACTATAGGTT- TGCACTGTTTGCCAGTGTTGG- AT
	R	CTCAAGATTTCCATCTTCAGT- ATCGCG
	F	GGGATTTTGTGTTGTCAAATAC- CCCCTG
Murine HepATitis Virus	F+T7	TAATACGACTCACTATAGGGA- TTTTGTTTGTCAAATACCCCCT- G
	R	ATGATGCCCTTGGTCATCTAA- TTCTAC
	F	GGCTGTGTCATATGTGTTGAC- GCATGA
	F+T7	TAATACGACTCACTATAGGCT- GTGTCATATGTGTTGACGCAT- GA

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Table 4: Sequences of the forward (F), forward with T7 promoter (F+T7), and reverse (R) primers for amplifying the short segment of each 1,799 nt segment of coronaviral RNAs. (Continued)

	R	ATCCAAC TTGTTGCCGTCCTC- ATCTAC
SARS Coronavirus 1	F	GGGTTTTACACTTAGAAACAC- AGTCTG
	F+T7	TAATACGACTCACTATAGGGT- TTTACACTTAGAAACACAGTC- TG
	R	AGAGTCTAATAAATTGCCTTC- CTCATC
SARS Coronavirus 2	F	GGGTTTTACACTTAAAAACAC- AGTCTG
	F+T7	TAATACGACTCACTATAGGGT- TTTACACTTAAAAACACAGTC- TG
	R	AGAATCAATTAAATTGTCATC- TTCGTC
Transmissible Gastroenteritis Virus	F	GGCAATTCGGTTCTGTATTGA- AAATGA
	F+T7	TAATACGACTCACTATAGGCA- ATTCGGTTCTGTATTGAAAAT- GA
	R	TTTGACAATGTAGTAGGCATC- ATGTTT

Table 5: Sequences of the antisense oligonucleotides (ASOs) targeting the 1,799 nt segments of coronaviral RNAs.

Coronavirus	ASO	Sequence
Bat Coronavirus 1A	1	CAGGGCTCTAGTCGAGCTGCAC- TAGAGCCCCTTGCTCGTTTAAA- TAAGCCTGATCAACAG
	2	GCAACTTCTTTATTGTAAATATC- AAAGGCGCGTACAACATGCTCC- GGTTCAGTACCATTA
Bat Coronavirus BM48-31	1	GACATCAGTGCTTGTGCCTGTG- CCGCACGGTGTAAGACGGGCC- GCACTTACACCGCAAAC
	2	TTTAGGAACTTTGCAAAACCA- GCAACTTTCTCATTATAAATATC- AAAAGCCCTGTAAAC
	3	AAAATAGGAGTCTAATAAGTTG- CCCTCTTCATCAACTTCCTGGAA- ACGGCAACAATTTGT
Common Moorhen Coronavirus	1	TGGGGTTCTAGACGGGCATCAC- TAGAACCCTTTACTCGTTTAAAT- AAGCTGTATTTTGCA
	2	GTTATATTATTATGTACATGAAA- CGCCCTTTTTACAATATCCGGCT- GAGTGCCAGACTGT
Infectious Bronchitis Virus	1	ACATCAAAGGCTCGCTTTACAA- CATCAGGATCACATCCACTAGC- AAGGGGTATCAGCCGA

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Table 5: Sequences of the antisense oligonucleotides (ASOs) targeting the 1,799 nt segments of coronaviral RNAs. (Continued)

Murine Hepatitis Virus	1	AAGCCACTGGCACAGGGTACAA- GACGGGCATTTACACTTGTACC- CCGAATCCGTTTAAAA
	2	CCAATGCCAGCTCGATTAGCAT- TACAAATGTCAAATGCCCTTAA- TTGAACATCAGTGTCC
	3	AACTTGTTGCCGTCCTCATCTAC- ACGCTGGAAGCGGCAGCAATTC- ACTTTATAATACAAA
SARS Coronavirus 1	1	TTTGCAAACCAGCAACTTTTTTC- GTTGTAAATATCAAAGCCCTG- TAGACGACATCAGTA
	2	TCTAATAAATTGCCTTCCTCATC- CTTCTCCTGGAAGCGACAGCAA- TTAGTTTTTAGGAAC
SARS Coronavirus 2	1	GACATCAGTACTAGTGCCTGTG- CCGCACGGTGTAAGACGGGCT- GCACTTACACCGCAAAC
	2	TTTAGGAATTTAGCAAAACCA- GCTACTTTATCATTGTAGATGTC- AAAAGCCCTGTATAC
Transmissible Gastroenteritis Virus	1	TAAATAACTTTGATCAACAGTA- AAACTCTGCATAGAAGTACGAT- CGCACATGCAACCATT

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Table 5: Sequences of the antisense oligonucleotides (ASOs) targeting the 1,799 nt segments of coronaviral RNAs. (Continued)

2 GGTCTGGATCAGTACCATTGCA-
GGGTTCTAGTCGAGCTGCACTA-
GAACCCCGCACTCGTT