



SARS-CoV-2 encoded microRNAs are involved in the process of virus infection and host immune response

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Supplementary Notes

The blast results of primers for the virus-encoded miRNAs against the Green Monkey genome. Hits with Evalue <10 were listed below.

The hits of MR147-3p primer within the green monkey genome.

blastn

Iteration: 0

Query: MR147-3p|primer

RID: E0ZBZG18016

Database: nt

Fields: query acc.ver, subject acc.ver, % identity, alignment length, mismatches, gap opens, q. start, q. end, s. start, s. end, evalue, bit score

10 hits found

MR147-3p primer	XM_007992365.1	100.000	14	0	0	1	14	617	604	3.1	28.2
MR147-3p primer	XR_500047.1	100.000	14	0	0	2	15	260	247	3.1	28.2
MR147-3p primer	XM_007962175.1	100.000	14	0	0	4	17	1614	1601	3.1	28.2
MR147-3p primer	XM_007962175.1	100.000	11	0	0	2	12	4612	4602	193	22.3
MR147-3p primer	XM_007962174.1	100.000	14	0	0	4	17	1629	1616	3.1	28.2
MR147-3p primer	XM_007962174.1	100.000	11	0	0	2	12	4717	4707	193	22.3
MR147-3p primer	XM_008019319.1	100.000	14	0	0	1	14	7839	7852	3.1	28.2
MR147-3p primer	XM_007992520.1	100.000	14	0	0	3	16	787	800	3.1	28.2
MR147-3p primer	XM_007992520.1	100.000	10	0	0	1	10	2287	2296	763	20.3
MR147-3p primer	XM_007972752.1	100.000	14	0	0	2	15	1071	1084	3.1	28.2

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The hits of MR66-3p primer within the green monkey genome.

blastn

Iteration: 0

Query: MR66-3p|primer

RID: E0ZJMPDF016

Database: nt

Fields: query acc.ver, subject acc.ver, % identity, alignment length, mismatches, gap opens, q. start, q. end, s. start, s. end, evalue, bit score

7 hits found

MR66-3p primer	XM_007992813.1	94.444	18	1	0	2	19	3752	3735	5.5	28.2
MR66-3p primer	XR_492158.1	100.000	14	0	0	5	18	1558	1545	5.5	28.2
MR66-3p primer	XM_008021434.1	100.000	14	0	0	8	21	295	282	5.5	28.2
MR66-3p primer	XM_008021433.1	100.000	14	0	0	8	21	171	158	5.5	28.2
MR66-3p primer	XM_008021432.1	100.000	14	0	0	8	21	225	212	5.5	28.2
MR66-3p primer	XM_008021431.1	100.000	14	0	0	8	21	317	304	5.5	28.2
MR66-3p primer	XM_007984286.1	100.000	14	0	0	9	22	1466	1479	5.5	28.2

The hits of MR359-3p primer within the green monkey genome.

blastn

Iteration: 0

Query: MR359-5p|primer

RID: E0ZKJRSW016

Database: nt

Fields: query acc.ver, subject acc.ver, % identity, alignment length, mismatches, gap opens, q. start, q. end, s. start, s. end, evalue, bit score

38 hits found

MR359-5p primer	XR_494964.1	100.000	17	0	0	6	22	4796	4812	0.089	34.2
MR359-5p primer	XM_007982620.1	100.000	17	0	0	6	22	4796	4812	0.089	34.2
MR359-5p primer	XM_007982619.1	100.000	17	0	0	6	22	4002	4018	0.089	34.2
MR359-5p primer	XM_007982618.1	100.000	17	0	0	6	22	4796	4812	0.089	34.2
MR359-5p primer	XM_007982617.1	100.000	17	0	0	6	22	4029	4045	0.089	34.2
MR359-5p primer	XM_007982616.1	100.000	17	0	0	6	22	4798	4814	0.089	34.2
MR359-5p primer	XM_007982615.1	100.000	17	0	0	6	22	4770	4786	0.089	34.2
MR359-5p primer	XM_007982614.1	100.000	17	0	0	6	22	4797	4813	0.089	34.2
MR359-5p primer	XR_490115.1	100.000	16	0	0	7	22	65	50	0.35	32.2

MR359-5p primer	XM_008007410.1	100.000	15	0	0	1	15	4428	4414	1.4	30.2
MR359-5p primer	XM_008007409.1	100.000	15	0	0	1	15	5036	5022	1.4	30.2
MR359-5p primer	XM_008010411.1	100.000	14	0	0	6	19	1601	1614	5.5	28.2
MR359-5p primer	XM_008010410.1	100.000	14	0	0	6	19	1636	1649	5.5	28.2
MR359-5p primer	XM_007964169.1	100.000	14	0	0	5	18	974	987	5.5	28.2
MR359-5p primer	XR_489852.1	100.000	14	0	0	1	14	733	746	5.5	28.2
MR359-5p primer	XM_007986893.1	100.000	14	0	0	5	18	1105	1092	5.5	28.2
MR359-5p primer	XM_007986893.1	100.000	11	0	0	9	19	2412	2402	338	22.3
MR359-5p primer	XM_007981723.1	100.000	14	0	0	2	15	173	160	5.5	28.2
MR359-5p primer	XM_007981722.1	100.000	14	0	0	2	15	1136	1123	5.5	28.2
MR359-5p primer	XR_494537.1	100.000	14	0	0	1	14	222	209	5.5	28.2
MR359-5p primer	XR_494534.1	100.000	14	0	0	1	14	222	209	5.5	28.2
MR359-5p primer	XM_007969762.1	100.000	14	0	0	1	14	1564	1551	5.5	28.2
MR359-5p primer	XM_007969761.1	100.000	14	0	0	1	14	1653	1640	5.5	28.2
MR359-5p primer	XM_007969760.1	100.000	14	0	0	1	14	1447	1434	5.5	28.2
MR359-5p primer	XM_007969759.1	100.000	14	0	0	1	14	1535	1522	5.5	28.2
MR359-5p primer	XM_007969757.1	100.000	14	0	0	1	14	1488	1475	5.5	28.2
MR359-5p primer	XM_007969756.1	100.000	14	0	0	1	14	1514	1501	5.5	28.2
MR359-5p primer	XM_007969755.1	100.000	14	0	0	1	14	1501	1488	5.5	28.2
MR359-5p primer	XM_007969754.1	100.000	14	0	0	1	14	1509	1496	5.5	28.2
MR359-5p primer	XM_007969753.1	100.000	14	0	0	1	14	1529	1516	5.5	28.2
MR359-5p primer	XM_007969752.1	100.000	14	0	0	1	14	1544	1531	5.5	28.2
MR359-5p primer	XM_007969751.1	100.000	14	0	0	1	14	1564	1551	5.5	28.2
MR359-5p primer	XM_007994213.1	100.000	14	0	0	5	18	2155	2142	5.5	28.2
MR359-5p primer	XM_007994211.1	100.000	14	0	0	5	18	2086	2073	5.5	28.2
MR359-5p primer	XM_007993758.1	100.000	14	0	0	1	14	581	568	5.5	28.2
MR359-5p primer	XM_007993755.1	100.000	14	0	0	1	14	581	568	5.5	28.2
MR359-5p primer	XM_007993754.1	100.000	14	0	0	1	14	364	351	5.5	28.2
MR359-5p primer	XM_007993753.1	100.000	14	0	0	1	14	650	637	5.5	28.2

The hits of MR369-5p primer within the green monkey genome.

blastn

Iteration: 0

Query: MR369-5p|primer

RID: E0ZTJPT9014

Database: nt

Fields: query acc.ver, subject acc.ver, % identity, alignment length, mismatches, gap opens, q. start, q. end, s. start, s. end, evalue, bit score

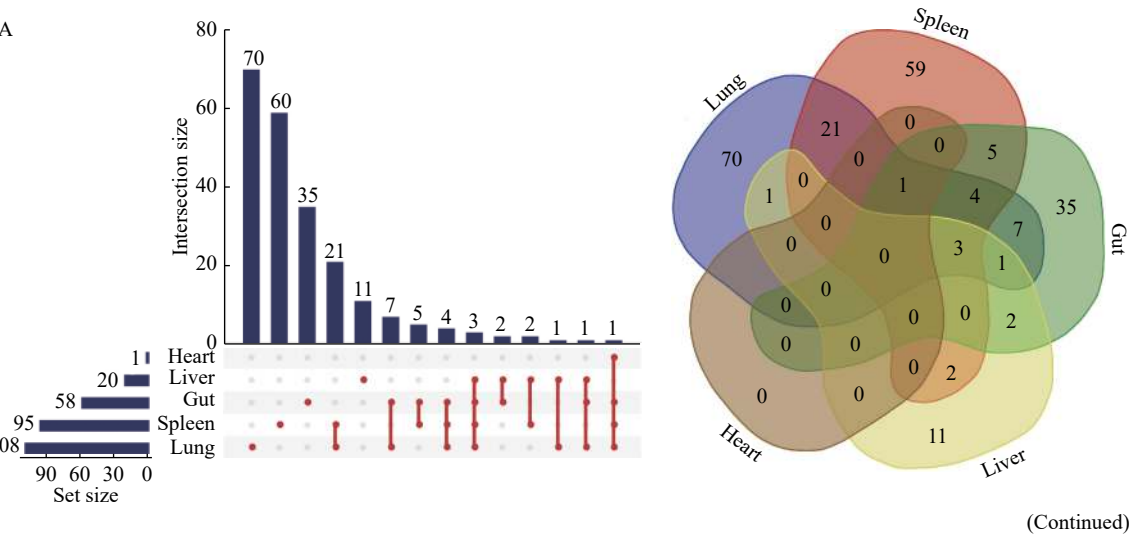
7 hits found

MR369-5p primer	XM_007960430.1	100.000	16	0	0	5	20	29	44	0.35	32.2
MR369-5p primer	XM_007960429.1	100.000	16	0	0	5	20	29	44	0.35	32.2
MR369-5p primer	XM_007999931.1	100.000	15	0	0	5	19	429	443	1.4	30.2
MR369-5p primer	XM_008002217.1	100.000	14	0	0	6	19	2233	2246	5.5	28.2
MR369-5p primer	XM_008002216.1	100.000	14	0	0	6	19	2074	2087	5.5	28.2

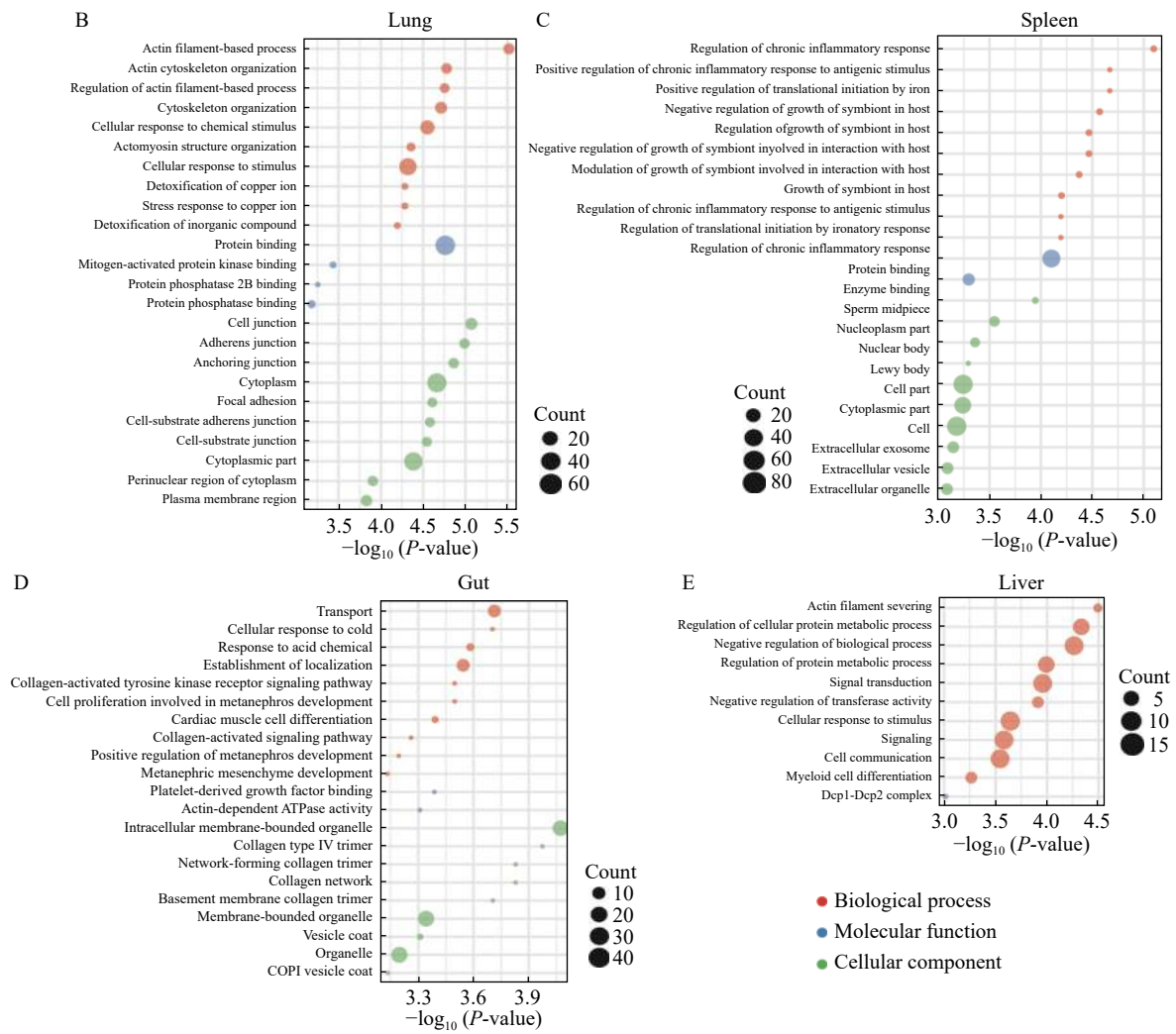
MR369-5p primer	XM_008002215.1	100.000	14	0	0	6	19	2074	2087	5.5	28.2
MR369-5p primer	XM_007960223.1	100.000	14	0	0	3	16	3473	3460	5.5	28.2

The hits of MR369-5p primer within the green monkey genome.

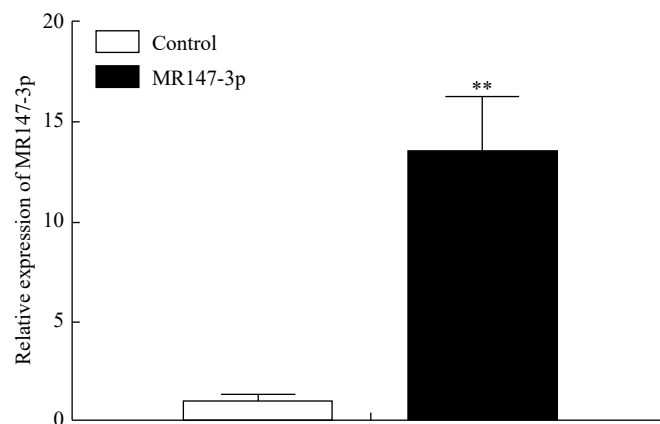
# blastn											
# Iteration: 0											
# Query: MR369-3p primer											
# RID: E0ZUBW4C016											
# Database: nt											
# Fields: query acc.ver, subject acc.ver, % identity, alignment length, mismatches, gap opens, q. start, q. end, s. start, s. end, evalue, bit score											
# 17 hits found											
MR369-3p primer	XR_494254.1	100.000	15	0	0	3	17	1333	1347	1.4	30.2
MR369-3p primer	XM_008005998.1	100.000	15	0	0	2	16	1940	1954	1.4	30.2
MR369-3p primer	XM_007994881.1	100.000	15	0	0	2	16	928	914	1.4	30.2
MR369-3p primer	XR_494939.1	100.000	14	0	0	1	14	9	22	5.5	28.2
MR369-3p primer	XM_007981558.1	100.000	14	0	0	3	16	2805	2818	5.5	28.2
MR369-3p primer	XM_008010759.1	100.000	14	0	0	6	19	733	746	5.5	28.2
MR369-3p primer	XM_008010758.1	100.000	14	0	0	6	19	1241	1254	5.5	28.2
MR369-3p primer	XM_008021207.1	100.000	14	0	0	3	16	4554	4567	5.5	28.2
MR369-3p primer	XM_008014348.1	100.000	14	0	0	3	16	463	450	5.5	28.2
MR369-3p primer	XM_007978600.1	100.000	14	0	0	1	14	10001	9988	5.5	28.2
MR369-3p primer	XM_007978599.1	100.000	14	0	0	1	14	10050	10037	5.5	28.2
MR369-3p primer	XM_007978598.1	100.000	14	0	0	1	14	10053	10040	5.5	28.2
MR369-3p primer	XM_007971081.1	100.000	14	0	0	9	22	841	828	5.5	28.2
MR369-3p primer	XM_007994188.1	100.000	14	0	0	3	16	56	43	5.5	28.2
MR369-3p primer	XM_007994187.1	100.000	14	0	0	3	16	119	106	5.5	28.2
MR369-3p primer	XM_007994186.1	100.000	14	0	0	3	16	801	788	5.5	28.2
MR369-3p primer	XM_007965475.1	100.000	14	0	0	4	17	4249	4236	5.5	28.2



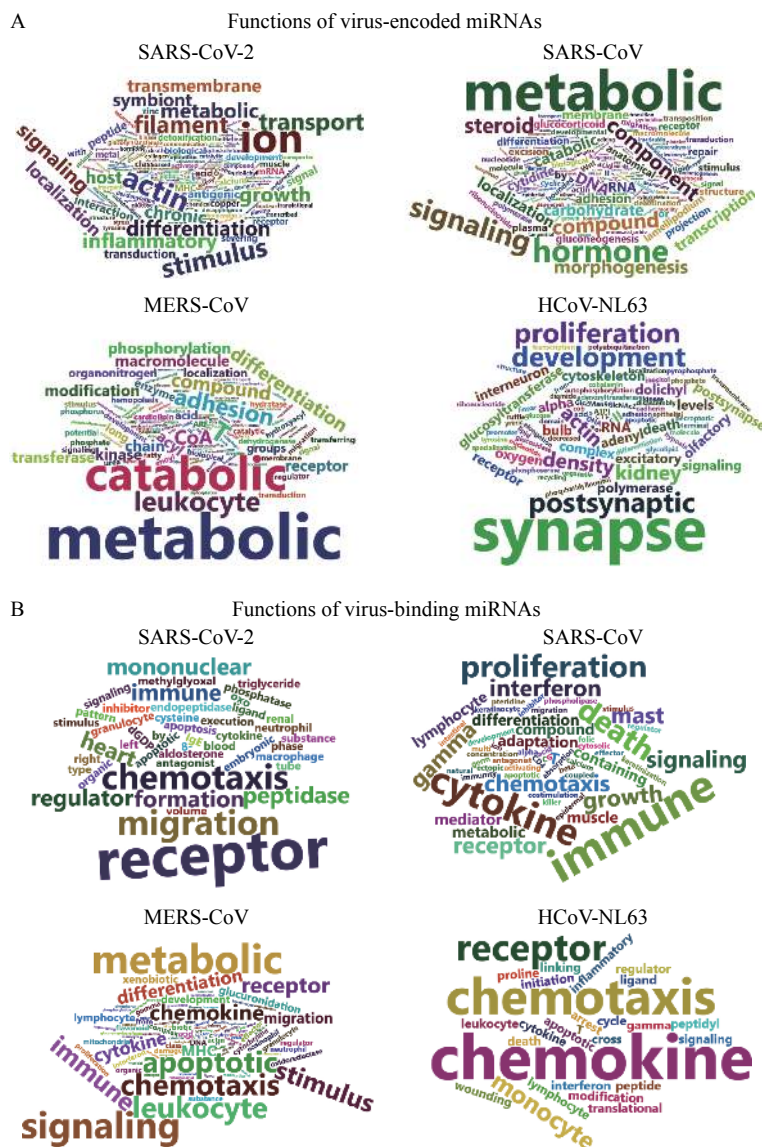
(Continued)



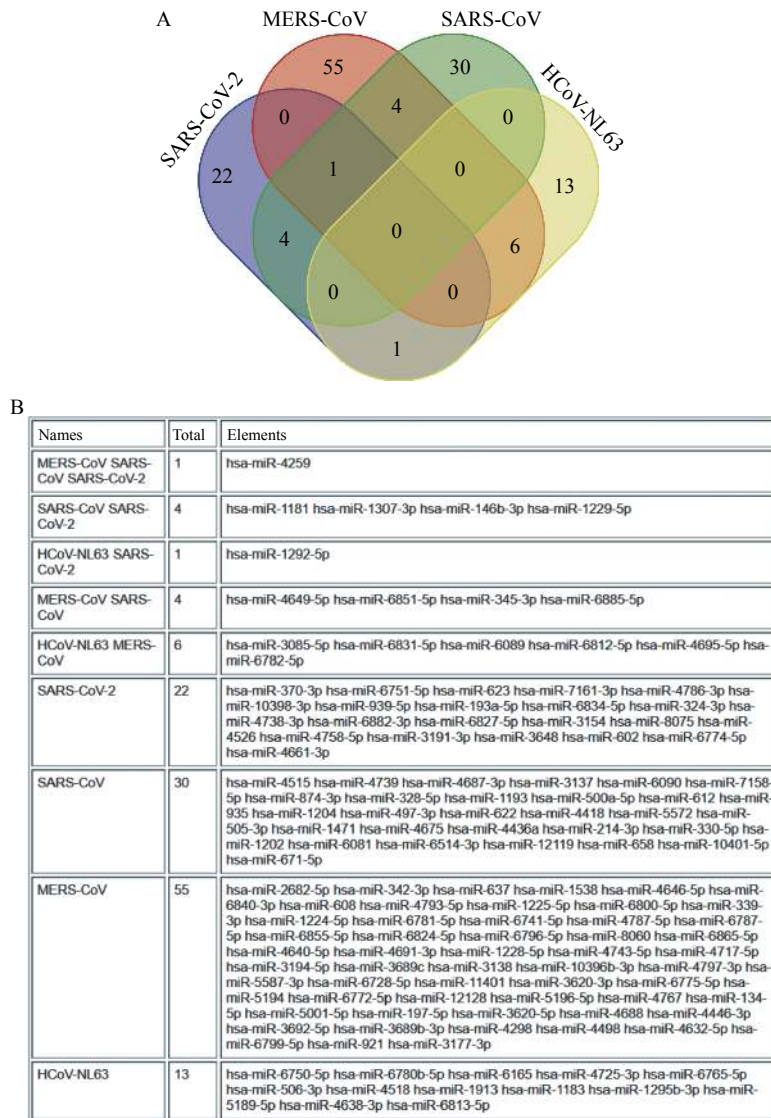
Supplementary Fig. 1 SARS-CoV-2 encoded miRNAs targeting at the enhancers in different tissues. A: The number of miRNA-gene regulation pairs in each tissue and the intersection between different tissues. B: Functional enrichment genes targeted by the virus miRNAs on enhancers in the lung. C: Functional enrichment genes targeted by the virus miRNAs on enhancers in the spleen. D: Functional enrichment genes targeted by the virus miRNAs on enhancers in the gut. E: Functional enrichment genes targeted by the virus miRNAs on enhancers in the liver. GO terms with P -value < 0.001 were plotted, and if the number of significant GO terms larger than 10, the top 10 are plotted.



Supplementary Fig. 2 The MR147-3p levels in the control cells and MR147-3p transfected pulmonary epithelial BEAS-2B cells. $**P < 0.01$.



Supplementary Fig. 3 Functions of virus miRNAs and host miRNAs hijacked by the virus genome. A: The wordcloud diagram of functions of gene targeted by virus miRNAs on 3'-UTR, 5'-UTR and enhancers. The size of words is in proportion to the frequency of functions annotated to genes. B: The wordcloud diagram of functions of genes targeted by host miRNAs hijacked by virus genome.



Supplementary Fig. 4 The comparison of miRNAs targeted at the virus genome of SARS-CoV-2, SARS-CoV, MERS-CoV, and HCoV-NL63. A: The veen diagram of the miRNAs that bind to the four virus genome. B: The list of the overlapped and unique miRNAs that targeted at the four virus genome.

Supplementary Table 1				Primer sequence and oligonucleotide sets for experimental validation			
Primers		Sequence (5'—3')		Primers		Sequence (5'—3')	
18s rRNA-F		AGAGCAAGAGAGGCATCCTC		CXCL16-F		AATTTCTTCCGACTCCCCGC	
18s rRNA-R		GACGGCCGCATCTTCTTGT		CXCL16-R		AAAGGAGCTGGAACCTCGTG	
FBXO9-F		GGGGCTACAGCTATGTTCCA		KIF1C-F		CTTCGGTCGTGGTCGTCTTC	
FBXO9-R		CACTACTGCAGTCTCACCA		KIF1C-R		TCTTGAAGGGGAAGCGTAGC	
TIFA-F		GGTCAAGGCTCCAGACAGGT		SLC25A11-F		CCTCCATGCCTGTGGACATT	
TIFA-R		CGCACAGACACTAGCCTAGAA		SLC25A11-R		CCCTCGTAGCGGACAACTTT	
FOXO3-F		CACCTTTGTGAATCCCACGC		TMED3-F		CATCACTGGAGGCCACTACG	
FOXO3-R		CACCACCCGTACAAGGAAG		TMED3-R		GCTGTCGTACTGCTTCTTCG	
PLD5-F		CCAACCAAACAGCCGAAGT		ZFAND6-F		CAGCCCAGCCCTGTATCAAAT	
PLD5-R		CGTTCCAGGGATCCTTCCG		ZFAND6-R		GCTGCTGTGCTGTGTCTGAT	
GPR1-F		CCTCTCTCCACTGGTTTGGC		SLA-F		TGCGTCAGAAGACTGTGGAC	
GPR1-R		TGTGCCAGAACAGCTGACTT		SLA-R		AAGGGACTCGTCTACCCCAA	
LPAR1-F		CTCGGCATAGTTCTGGACCC		PLD2-F		AGCAGGGACTCTGGAGAACT	
LPAR1-R		CTGCGGACAACACACGTCTA		PLD2-R		TGTCCACAATCTCATCGCCC	
RFC1-F		TACTCTCCCTGCTGACCAGT		SMTNL2-F		CAGATCCTGCTCGAGTGGTG	
RFC1-R		GGACACCAGGTCATCCCATT		SMTNL2-R		AGTCAAAGGCATCGGGGAAG	
GHR-F		GGGCCTCATACTCAATGCGA		U6		CTCGCTTCGGCAGCACATATACT	
GHR-R		TCAGTTGGTCTGTGCTCACG		LTA-F		GCTCCCAGAAGATGGTGTATC	
EXOC7-F		GCAGATCCAGACCTACCAGC		LTA-R		CCATCTGTGTGGGTGGATAG	
EXOC7-R		CCTTGTCCTGGAGCTTGACT		MR147-3p		5- TGGGTGGGAGTAGTCCCTG-3	
RAD9A-F		TGCCCTCCATTTCCTTTTAC		MR66-3p		5-AGTGTACTCACTAGCACAAAGTA-3	
RAD9A-R		AACTTCTTGGGTGGGGGAGT		MR359-5p		5-TCACTGCTACTGGAATGGTCTG-3	
TFE3-F		CCCTTTTGAAGGAACGGCAG		MR369-5p		5-GGGTGCATTTTCGCTGATTTTGG-3	
TFE3-R		AGTGCCCAGTTTCCTTGATCC		MR369-3p		5-TGATTTTGGGGTCCATTATCAG-3	
FBXO9-F		TCCAGTGGTCACCAGAGGTT		Oligonucleotide sets used for MR147-3p construct			
FBXO9-R		GCGAAGAACAAGGGGGTGTA		Pre-MR147-3p	5'-TGCTGGTCCAGTTTCCAGGAA		
METTL2B-F		GCCCAAGGGCAGTCTTGATA			TCCCTGTTTGGCCACTGACTGACAG		
METTL2B-R		CTCGCAGAAGTACCATCCCC			GGATTCGGGAAAAGTGGAC-3' (sense)		
TMPRSS2-F		ATACAAGCTGGGGTTCTGGC			5'-CCGGTTCTTGGGTGGGAAGTCCCTG		
TMPRSS2-R		TAGCCGTCTGCCCTCATTTG		GTCAGTCAGTGCCAAAACAGGGA			
ARRB2-F		TCTTCTTACCATAACCCAGAA		CTACTCCCACCAAGACG-3' (antisense)			
ARRB2-R		ATCTCAAAGTCTACGCCGA					

Supplementary Table 2 The details of candidate miRNAs

pre-miRNA ID	Start	End	MFE (kcal/mol)	Sequence of pre-miRNA	5p miRNA	3p miRNA
MD113	7961	8026	-26.8	UGUCAACCUAUACUGUUACUAGAUCAG GCAUUAGUGUCUGAUGUUGGUGAUAGU GCGGAAGUUGCA	ACCUAUAC UGUUACUA GAUCAG	GAUGUUGG UGAUAGUG CGGAAG
MD129	8787	8960	-55.64	GUGGUGGUAGUUUAUACUAAUGACAAAG CUUGCCCAUUGAUUGCUGCAGUCAUAA CAAGAGAAGUGGGUUUUGUCGUGCCUG GUUUGCCUGGCACGAUUAUACGCACAA CUAAUGGUGACUUUUUGCAUUUCUUAC CUAGAGUUUUUAGUGCAGUUGGUAACA UCUGUUACACAC	UAUACUAA UGACAAAG CUUGCC	CACGAUUA UACGCACA ACUAAU
MD172	11234	11334	-36.6	GCUAGUUGGGUGAUGCGUAUUUUGACA UGGUUGGAUAUGGUUGAUACUAGUUUG UCUGGUUUUAAGCUAAAAGACUGUGUU AUGUAUGCAUCAGCUGUAGU UGGUACUGGUCAGGCAUUAACAGUUAC ACCGGAAGCCAAUAUGGAUCAAGAAUC CUUUGGUGGUGCAUCGUGUUGUCUGUA CUGCCGUUGCCA	AUACUAGU UUGUCUGG UUUUAA	UGUGUUUAU GUAUGCAU CAGCUG
MD198	13171	13263	-32.7	GUACGUGGCUUUGGAGACUCCGUGGAG GAGGUCUUAUCAGAGGCACGUCAAC	UAUGGAUC AAGAAUCC UUUGGU	UUUGGUGG UGCAUCGU GUUGUC
MD2	347	398	-22.7	GUACGUGGCUUUGGAGACUCCGUGGAG GAGGUCUUAUCAGAGGCACGUCAAC	UUGGAGAC UCCGUGGA GGAGGU	AGGUCUUA UCAGAGGC ACGUCA
MD202	13379	13436	-20.5	GUCUGCGGUUAUGUGGAAAGGUUAUGGC UGUAGUUGUGAUCAACUCCGCGAACCC AUGC	AAAGGUUA UGGCUGUA GUUGUG	UGAUCAAC UCCGCGAA CCCAUG
MD21	2033	2105	-24.01	UUGGCUACUAAACAAUCUAGUUGUAAUG GCCUACAUAACAGGUGGUGUUGUUCAG UUGACUUCGCAGUGGCUAA AGGUUGGUUAUGCAAAAGUAUUCUACAC UCCAGGGACCACUGGUACUGGUAAGA GUCAUUUUGCUAUUUGCCU	UAAUGGCC UACAUUAC AGGUGG UAUGCAA AGUAUUCU ACACUC	UUACAGGU GGUGUUGU UCAGUU UGGUAAGA GUCAUUUU GCUAUU
MD251	17134	17197	-30.6	CCUUCUGCUCGCAUAGUGUAUACAGCU UGCUCUCAUGCCCGUGUUGAUGCACUA UGUGAGAAGG	UGCUCGCA UAGUGUAU ACAGCU	UGUUGAUG CACUAUGU GAGAAG
MD255	17561	17650	-30.4	GGCGUUGUCCUGCUGAAAUUGUUGACA CUGUGAGUGCUUUGGUUUUAUGAUAAUA AGCUUAAAGCACAUAAAGACAAAUCAG CUCAAUGCU	UUUGGUUU AUGAUAAU AAGCUU	UUAAAGCA CAUAAAGA CAAUUC
MD266	18252	18325	-28.2	CAUGUUUAUCACCCGCGAAGAAGCUAU AAGACAUGUACGUGCAUGGAUUGGCUU CGAUGUCGAGGGGUGUCAUG UAUAGAUUAUGUACCACUAAAGUCUGC UACGUGUAUAACACGUUGCAAUUUAGG UGGUGCUGUCUGUA	UACGUGCA UGGAUUGG CUUCGA UAUGUACC ACUAAAAGU CUGCUA	GAUUGGCU UCGAUGUC GAGGGG UUGCAAUU UAGGUGGU GCUGUC
MD285	19483	19554	-22.8	GCUGUCUGUAGACAUCAUGCUAAUGAG UACAGAUUGUAUCUCGAUGCUUAUAAC AUGAUGAUCUCAGCUGGC AACAAAAGCUAGCUCUUGGAGGUUCCG UGGCUAUAAGAUAAACAGAACAUUCUU GGAAUGCUGAUCUUUAUAAGCUAUGG GACACUUCGCAUGGUGGACAGCCUUUG UU	AGUACAGA UUGUAUCU CGAUGC	AUGCUUAU AACAUAGU GAUCUC
MD308	21131	21240	-38.4	GAUGAAAGGAUUGAUAAAGUACUUAUU GAGAAGUGCUCUGCCUAUACAGUUGAA CUCGGUACAGAAGUAAAUGAGUUCGCC UGUGUUGUGGCAGAUUCUGUCAUAAAA ACUUUGCAACCAGUAUC	UUGGAGGU UCCGUGGC UAUAAA	UGAUCUUU AUAAGCUC AUGGGA
MD32	2801	2925	-42.1	GAUGAAAGGAUUGAUAAAGUACUUAUU GAGAAGUGCUCUGCCUAUACAGUUGAA CUCGGUACAGAAGUAAAUGAGUUCGCC UGUGUUGUGGCAGAUUCUGUCAUAAAA ACUUUGCAACCAGUAUC	CUGCCUAU ACAGUUGA ACUCGG	AAUGAGUU CGCCUGUG UUGUGG

Supplementary Table 2 The details of candidate miRNAs (continued)

pre-miRNA ID	Start	End	MFE (kcal/mol)	Sequence of pre-miRNA	5p miRNA	3p miRNA
MD330	22614	22679	-22.8	AUGCUUGGAACAGGAAGAGAAUCAGCA ACUGUGUUGCUGAUUAUUCUGUCCUAU AUAAUUCGCAU	AACUGUGU UGCUGAUU AUUCUG	GAUUAUUC UGUCCUAU AUAAUU
MD363	24799	24860	-21.6	UGCCAUUUUGUCAUGAUGGAAAAGCACA CUUCCUCGUGAAGGUGUCUUUGUUUC AAAUGGCA	CACUUUCC UCGUGAAG GUGUCU	AGGUGUCU UUGUUUCA AAUGGC
MD369	25217	25276	-21.3	GGUUUUUAAGCUGGCUUGAUUGCCAUA GUAAUGGUGACAAUUAUGCUUUGCUGU AUGACC	AUUGCCAU AGUAAUGG UGACAA	ACAAUUUAU GCUUUGCU GUAUGA
MD380	26138	26197	-25.7	UCGACGGUUAUCCGGAGUUGUUAUUC CAGUAAUGGAACCAUUUAUGAUGAAC CGACGA	UUAAUCCA GUAAUGGA ACCAAU	ACCAAUUU AUGAUGAA CCGACG
MD387	26743	26861	-39.4	AUUGGAUCACCGUGGAAUUGCUAUCG CAAUGGCUUGUCUUGUAGGCUUGAUGU GGCUCAGCUACUUCUUGCUUCUUUCA GACUGUUUGCGCGUACGCGUCCAUGU GGUCAUUCAAU	AUGUGGCU CAGCUACU UCAUUG	UCAUUGCU UCUUUCAG ACUGUU
MD40	3148	3208	-20.6	AUUUGGUGCCACUUCUGCUGCUCUUC ACCUGAAGAAGAGCAAGAAGAAGAUUG GUUAGAU	UGCCACUU CUGCUGCU CUUCAA	AGCAAGAA GAAGAUUG GUUAGA
MD44	3514	3597	-32.3	GCAAGUUGAAUCUGAUGAUUACAUAGC UACUAAUGGACCACUUAAGUGGGUGG UAGUUGUGUUUAAGCGGACACAAUCU UGC	CUUAAAAGU GGGUGGUA GUUGUG	GGUGGUAG UUGUGUUU UAAGCG
MD6	564	622	-28.7	GUGGUGAGACACUUGGUGUCCUUGUCC CUCAUGUGGGCGAAAUACCAGUGGCUU ACCGC	UGAGACAC UUGGUGUC CUUGUC	GCGAAAUA CCAGUGGC UUACCG
MD68	5358	5425	-21.5	CUUAAUACAGAGCAAGGGCUGGUGAAG CUGCUAACUUUUGUGCACUUAUCUAG CCUACUGUAAUAG	ACAGAGCA AGGGCUGG UGAAGC	ACUUAUCU UAGCCUAC UGUAAU
MD69	5374	5482	-38.7	GGCUGGUGAAGCUGCUAACUUUUGUGC ACUUAUCUUAGCCUACUGUAAUAAGAC AGUAGGUGAGUUAGGUGAUGUUAGAGA AACAAUGAGUUACUUGUUUCAACAUG CC	UUGUGCAC UUAUCUUA GCCUAC	UAGGUGAG UUAGGUGA UGUUAG
MD7	651	725	-28.7	AAGGAGCUGGUGGCCAUAGUUACGGCG CCGAUCUAAAGUCAUUUGACUUAGGCG ACGAGCUUGGCACUGAUCCUU	UAAAGUCA UUUGACUU AGGGCA	GGCGACGA GCUUGGCA CUGAUC
MD72	5569	5631	-21.21	UAUGUACAUGGGCACACUUUCUUAUGA ACAAUUUAAGAAAGGUGUUCAGAUACC UUGUACGUG	ACAUGGGC ACACUUUC UUAUGA	AGGUGUUC AGAUACCU UGUACG
MD78	5727	5783	-24.7	UUACUUGUGCUAGUGAGUACACUGGUA AUUACCAGUGUGGUCACUUAUAAACUA UAA	UACACUGG UAAUUACC AGUGUG	GUGUGGUC ACUUAUAA CAUAUA
MD88	6641	6696	-24.1	GGUUUAGCUGCUGUUAUUAGUGUCCCU UGGGAUACUUAAGCUAAUUAUGCUAAG CC	AGUGUCCC UUGGGAUA CUAUAG	ACUUAAGC UAAUUUAG CUAAGC
MD9	757	822	-27.7	ACAUAGCAGUGGUGUUACCCGUGAACU CAUGCGUGAGCUUAACGGAGGGGCAUA CACUCGCUAUGU	AGCAGUGG UGUUACCC GUGAAC	UUAACGGA GGGGCAUA CACUCG
MR147	11734	11844	-34.6	GACUGUACAGUGGCUACUUUGAUACAA GGUUUGCCACCAACACCAACAUUUA AUGUUGAGUUUGAAGGCAUCUUAUGCUA UUCUUGGGUGGGAGUAGUCCUGUGAA UUC	CCCAACAA UUUAAUGU UGAGUU	UCUUGGGU GGGAGUAG UCCUG

Supplementary Table 2 The details of candidate miRNAs (continued)

pre-miRNA ID	Start	End	MFE (kcal/mol)	Sequence of pre-miRNA	5p miRNA	3p miRNA
MR221	17828	17896	-21.6	GAGCUGUUUCAGUGGUUUGAGUGAAUA UGACAUAGUCAUAUUCUGAGCCCUGUG AUGAAUCAACAGUUU	UGACAUAG UCAUAUUC UGAGCC	AGUCAUAU UCUGAGCC CUGUGA
MR221	17828	17896	-21.6	GAGCUGUUUCAGUGGUUUGAGUGAAUA UGACAUAGUCAUAUUCUGAGCCCUGUG AUGAAUCAACAGUUU	UGACAUAG UCAUAUUC UGAGCC	AGUCAUAU UCUGAGCC CUGUGA
MR230	18089	18189	-33.51	GGUCAUGUCCUUAGGUUAGCCAGGUAU GUCAACACAUAAACCUUCAGUUUUGAA UUUAGUGUCAACACUGAGGUGUGUAGG UGCCUGUGUAGGAUGUAACC	CAACACAU AAACCUUC AGUUUU	ACACUGAG GUGUGUAG GUGCCU
MR288	22614	22679	-23.6	AUGCGGAAUUAUUAAGGACAGAAUAU CAGCAACACAGUUGCUGAUUCUCUCC UGUCCAAGCAU	UCAGCAAC ACAGUUGC UGAUUC	UGAUUCUC UUCUGUU CCAAGC
MR29	2534	2623	-27.8	GUUAAUACAAACUGGUGUACCAACCAA UGGAGCUUCAACAGCUUCACUAGUAGG UUGUUCUAAUGGUUGUAAAUCACCAGU UUUCAAGAC	CAAACUGG UGUACCAA CCAAUG	UAAUGGUU GUAAAUCA CCAGUU
MR328	24766	24840	-25.32	CCUUCACGAGGAAAGUGUGCUUUCCA UCAUGACAAAUGGCAGGAGCAGUUGUG AAGUUCUUUCUUGUGCAGGG	UCCAUCA UGACAAA GGCAGG	CAGGAGCA GUUGUGAA GUUCUU
MR345	26059	26138	-25.3	AUUGUGUGAAUUUGGACAUGUUCUUA GGCUCACUACAACAAUUUUAUUGUAGAUG AAGAAGGUAACAUGUUAACACCAGU	UCAACAAU UUUAUUGU AGAUGA	AUGAAGAA GGUAACAU GUUCAA
MR348	26131	26211	-28	CACGCUAGUAGUCGUCGUGGUAUC AUAAAUUGGUCCAUAUCUGGAUUAAC AACUCCGGAUGAACCGUCGAUUGUGUG GCAAAGCAAUAUUGUCACUGCUACUGG	UCGGUUA UCAUAAU UGGUUC	CCGGAUGA ACCGUCGA UUGUGU
MR359	27102	27180	-25.6	AAUGGUCUGUGUUUAAUUAUAGUUGC CAAUCCUGUAGCGACUGUAUGCAGC UCUGAGGGUCCACAAACGUAUUGCGG	UCACUGCU ACUGGAAU GGUCUG	UUGCCAAU CCUGUAGC GACUGU
MR369	28277	28338	-21.7	GGUGCAUUCGCGUAUUUUGGGGUCCA UUUUCAGA	GGGUGCAU UUCGUGA UUUUGG	UGAUUUUG GGGUCCAU UAUCAG
MR375	28782	28846	-25.6	GCGACUACGUGAUGAGGAACGAGAAGA GGCUUGACUGCCGCCUCUGCUCCUUC UGCGUAGAAGC	AGGCUUGA CUGCCGCC UCUGCU	UCUGCUCC CUUCUGCG UAGAAG
MR385	29405	29482	-26.6	GAAAUCAUCCAAAUCUGCAGCAGGAAG AAGAGUCACAGUUUGCUGUUUCUUCUG UCUCUGCGUAAGGCUUGAGUUUC	CAGUUUGC UGUUUCUU CUGUCU	UUCUUCUG UCUCUGCG GUAAGG
MR49	4160	4248	-28.7	GUGGUUAUAUAAUUGUCUGUUGGCACU UUUCUCAAAGCUUUCGCUAGCAUUUCA GUAGUGCCACCAGCCUUUUAGUAGGU AUAACCAC	AAAGCUUU CGCUAGCA UUUCAG	AUUUCAGU AGUGCCAC CAGCCU
MR66	5727	5783	-21.9	UUUAUUGUUUAUAGUGACCACACUGGU AAUUACCAGUGUACUCACUAGCACAAG UAA	CACACUGG UAAUUACC AGUGUA	AGUGUACU CACUAGCA CAAGUA
MR8	756	823	-23.5	GACAUAGCGAGUGUAUGCCCCUCCGUU AAGCUCACGCAUGAGUUCACGGGUAAC ACCACUGCUAUGUU	CUCACGCA UGAGUUA CGGGUA	CACGGGUA ACACCACU GCUAUG

Supplementary Table 3 The target of the putative virus miRNAs on 3'-UTR and 5'-UTR

ID	3'UTR ID	Gene name	UTR	ID	3'UTR ID	Gene name	UTR
MD129_5	3HSAA167007	<i>SUFU</i>	3'UTR	MD285_3	3HSAA160809	<i>SNX1</i>	3'UTR
MD198_3	3HSAA162959	<i>SPN</i>	3'UTR	MD285_3	3HSAA160809	<i>SNX1</i>	3'UTR
MD198_3	3HSAA162959	<i>SPN</i>	3'UTR	MD285_3	3HSAA160809	<i>SNX1</i>	3'UTR
MD198_3	3HSAA038922	<i>CPPED1</i>	3'UTR	MD285_3	3HSAA160809	<i>SNX1</i>	3'UTR
MD198_3	3HSAA149309	<i>SDCI</i>	3'UTR	MD285_3	3HSAA160809	<i>SNX1</i>	3'UTR
MD198_3	3HSAA149310	<i>SDCI</i>	3'UTR	MD285_3	3HSAA160809	<i>SNX1</i>	3'UTR
MD198_3	3HSAA149311	<i>SDCI</i>	3'UTR	MD285_3	3HSAA160817	<i>SNX1</i>	3'UTR
MD198_3	3HSAA149307	<i>SDCI</i>	3'UTR	MD308_3	3HSAA059565	<i>FAM169A</i>	3'UTR
MD198_3	3HSAA149307	<i>SDCI</i>	3'UTR	MD308_3	3HSAA059565	<i>FAM169A</i>	3'UTR
MD2_5	3HSAA033184	<i>CHAC1</i>	3'UTR	MD308_3	3HSAA059566	<i>FAM169A</i>	3'UTR
MD2_5	3HSAA033184	<i>CHAC1</i>	3'UTR	MD308_3	3HSAA059565	<i>FAM169A</i>	3'UTR
MD2_5	3HSAA033184	<i>CHAC1</i>	3'UTR	MD308_3	3HSAA059569	<i>FAM169A</i>	3'UTR
MD2_5	3HSAA004235	<i>ADIPOR1</i>	3'UTR	MD308_3	3HSAA059569	<i>FAM169A</i>	3'UTR
MD250_5	3HSAA114393	<i>NR4A3</i>	3'UTR	MD330_3	3HSAA187203	<i>WDR17</i>	3'UTR
MD250_5	3HSAA114393	<i>NR4A3</i>	3'UTR	MD330_3	3HSAA187200	<i>WDR17</i>	3'UTR
MD250_5	3HSAA114393	<i>NR4A3</i>	3'UTR	MD330_3	3HSAA187200	<i>WDR17</i>	3'UTR
MD251_5	3HSAA076732	<i>HLA-DPA1</i>	3'UTR	MD330_3	3HSAA187204	<i>WDR17</i>	3'UTR
MD251_5	3HSAA076732	<i>HLA-DPA1</i>	3'UTR	MD330_3	3HSAA187204	<i>WDR17</i>	3'UTR
MD255_3	3HSAA161511	<i>SOBP</i>	3'UTR	MD330_3	3HSAA034126	<i>CHRM2</i>	3'UTR
MD284_3	3HSAA025345	<i>CA3</i>	3'UTR	MD363_3	3HSAA011957	<i>ASB15</i>	3'UTR
MD285_5	3HSAA032792	<i>CEP63</i>	3'UTR	MD363_3	3HSAA011958	<i>ASB15</i>	3'UTR
MD285_5	3HSAA032792	<i>CEP63</i>	3'UTR	MD363_3	3HSAA011958	<i>ASB15</i>	3'UTR
MD285_5	3HSAA128322	<i>PMPCB</i>	3'UTR	MD369_3	3HSAA057009	<i>ERCC4</i>	3'UTR
MD285_5	3HSAA128319	<i>PMPCB</i>	3'UTR	MD369_3	3HSAA138201	<i>RAD50</i>	3'UTR
MD285_5	3HSAA128324	<i>PMPCB</i>	3'UTR	MD380_5	3HSAA119735	<i>PAQR5</i>	3'UTR
MD285_5	3HSAA128320	<i>PMPCB</i>	3'UTR	MD380_5	3HSAA119735	<i>PAQR5</i>	3'UTR
MD285_5	3HSAA128311	<i>PMPCB</i>	3'UTR	MD387_5	3HSAA006480	<i>ALG11</i>	3'UTR
MD285_5	3HSAA128314	<i>PMPCB</i>	3'UTR	MD387_5	3HSAA006483	<i>ALG11</i>	3'UTR
MD285_5	3HSAA128312	<i>PMPCB</i>	3'UTR	MD40_5	3HSAA037522	<i>COL6A6</i>	3'UTR
MD285_5	3HSAA128307	<i>PMPCB</i>	3'UTR	MD40_5	3HSAA056376	<i>EPB41L5</i>	3'UTR
MD285_5	3HSAA128313	<i>PMPCB</i>	3'UTR	MD40_5	3HSAA056374	<i>EPB41L5</i>	3'UTR
MD285_5	3HSAA128321	<i>PMPCB</i>	3'UTR	MD40_5	3HSAA056374	<i>EPB41L5</i>	3'UTR
MD285_5	3HSAA128315	<i>PMPCB</i>	3'UTR	MD44_5	3HSAA118235	<i>OXSM</i>	3'UTR
MD285_3	3HSAA160826	<i>SNX1</i>	3'UTR	MD44_5	3HSAA118235	<i>OXSM</i>	3'UTR
MD285_3	3HSAA160805	<i>SNX1</i>	3'UTR	MD44_3	3HSAA047043	<i>DHCR24</i>	3'UTR
MD285_3	3HSAA160823	<i>SNX1</i>	3'UTR	MD44_3	3HSAA047027	<i>DHCR24</i>	3'UTR
MD285_3	3HSAA160812	<i>SNX1</i>	3'UTR	MD44_3	3HSAA047028	<i>DHCR24</i>	3'UTR
MD285_3	3HSAA160820	<i>SNX1</i>	3'UTR	MD44_3	3HSAA047037	<i>DHCR24</i>	3'UTR
				MD6_5	3HSAA030494	<i>CD2BP2</i>	3'UTR

Supplementary Table 3 The target of the putative virus miRNAs on 3'-UTR and 5'-UTR (continued)

ID	3'UTR ID	Gene name	UTR	ID	3'UTR ID	Gene name	UTR
MD6_5	3HSAA030496	<i>CD2BP2</i>	3'UTR	MR147_3	3HSAA058038	<i>EXOC7</i>	3'UTR
MD6_5	3HSAA030495	<i>CD2BP2</i>	3'UTR	MR147_3	3HSAA171417	<i>TFE3</i>	3'UTR
MD6_5	3HSAA030495	<i>CD2BP2</i>	3'UTR	MR147_3	3HSAA171423	<i>TFE3</i>	3'UTR
MD6_5	3HSAA115830	<i>NUP188</i>	3'UTR	MR147_3	3HSAA171419	<i>TFE3</i>	3'UTR
MD6_5	3HSAA115828	<i>NUP188</i>	3'UTR	MR147_3	3HSAA171415	<i>TFE3</i>	3'UTR
MD6_5	3HSAA115827	<i>NUP188</i>	3'UTR	MR147_3	3HSAA171414	<i>TFE3</i>	3'UTR
MD6_5	3HSAA115825	<i>NUP188</i>	3'UTR	MR147_3	3HSAA171421	<i>TFE3</i>	3'UTR
MD6_5	3HSAA115822	<i>NUP188</i>	3'UTR	MR147_3	3HSAA171424	<i>TFE3</i>	3'UTR
MD6_5	3HSAA115821	<i>NUP188</i>	3'UTR	MR147_3	3HSAA171410	<i>TFE3</i>	3'UTR
MD6_5	3HSAA115823	<i>NUP188</i>	3'UTR	MR147_3	3HSAA171413	<i>TFE3</i>	3'UTR
MD6_5	3HSAA115816	<i>NUP188</i>	3'UTR	MR147_3	3HSAA171409	<i>TFE3</i>	3'UTR
MD6_5	3HSAA115817	<i>NUP188</i>	3'UTR	MR147_3	3HSAA171416	<i>TFE3</i>	3'UTR
MD6_5	3HSAA115812	<i>NUP188</i>	3'UTR	MR147_3	3HSAA171422	<i>TFE3</i>	3'UTR
MD6_5	3HSAA115813	<i>NUP188</i>	3'UTR	MR147_3	3HSAA171418	<i>TFE3</i>	3'UTR
MD68_5	3HSAA116435	<i>NXT1</i>	3'UTR	MR147_3	3HSAA171428	<i>TFE3</i>	3'UTR
MD68_5	3HSAA116433	<i>NXT1</i>	3'UTR	MR147_3	3HSAA171420	<i>TFE3</i>	3'UTR
MD68_5	3HSAA116434	<i>NXT1</i>	3'UTR	MR147_3	3HSAA171411	<i>TFE3</i>	3'UTR
MD68_5	3HSAA163639	<i>SREBF1</i>	3'UTR	MR147_3	3HSAA171412	<i>TFE3</i>	3'UTR
MD68_5	3HSAA163629	<i>SREBF1</i>	3'UTR	MR147_3	3HSAA138429	<i>RAD9A</i>	3'UTR
MD68_5	3HSAA163656	<i>SREBF1</i>	3'UTR	MR147_3	3HSAA138433	<i>RAD9A</i>	3'UTR
MD68_5	3HSAA163634	<i>SREBF1</i>	3'UTR	MR147_3	3HSAA138426	<i>RAD9A</i>	3'UTR
MD68_5	3HSAA163670	<i>SREBF1</i>	3'UTR	MR147_3	3HSAA138426	<i>RAD9A</i>	3'UTR
MD68_5	3HSAA163664	<i>SREBF1</i>	3'UTR	MR147_3	3HSAA138435	<i>RAD9A</i>	3'UTR
MD68_5	3HSAA163628	<i>SREBF1</i>	3'UTR	MR147_3	3HSAA138427	<i>RAD9A</i>	3'UTR
MD68_5	3HSAA163642	<i>SREBF1</i>	3'UTR	MR221_5	3HSAA093717	<i>LRRC59</i>	3'UTR
MD7_5	3HSAA074335	<i>HCFC2</i>	3'UTR	MR230_5	3HSAA163713	<i>SRGAP3</i>	3'UTR
MD72_3	3HSAA089732	<i>LAMC1</i>	3'UTR	MR230_5	3HSAA093715	<i>LRRC58</i>	3'UTR
MD78_5	3HSAA190014	<i>ZBTB44</i>	3'UTR	MR230_5	3HSAA036311	<i>CMTM4</i>	3'UTR
MD88_5	3HSAA154885	<i>SIPA1L1</i>	3'UTR	MR230_5	3HSAA036309	<i>CMTM4</i>	3'UTR
MD88_5	3HSAA086948	<i>KIAA1045</i>	3'UTR	MR230_3	3HSAA021408	<i>C17ORF63</i>	3'UTR
MD88_5	3HSAA086948	<i>KIAA1045</i>	3'UTR	MR230_3	3HSAA021408	<i>C17ORF63</i>	3'UTR
MR147_5	3HSAA101516	<i>METTL2B</i>	3'UTR	MR230_3	3HSAA021408	<i>C17ORF63</i>	3'UTR
MR147_5	3HSAA061950	<i>FBXO9</i>	3'UTR	MR230_3	3HSAA021408	<i>C17ORF63</i>	3'UTR
MR147_5	3HSAA061950	<i>FBXO9</i>	3'UTR	MR230_3	3HSAA021408	<i>C17ORF63</i>	3'UTR
MR147_5	3HSAA061950	<i>FBXO9</i>	3'UTR	MR288_5	3HSAA048226	<i>DLK2</i>	3'UTR
MR147_5	3HSAA061962	<i>FBXO9</i>	3'UTR	MR288_3	3HSAA124026	<i>PGM3</i>	3'UTR
MR147_5	3HSAA061955	<i>FBXO9</i>	3'UTR	MR288_3	3HSAA124043	<i>PGM3</i>	3'UTR
MR147_5	3HSAA061955	<i>FBXO9</i>	3'UTR	MR288_3	3HSAA124048	<i>PGM3</i>	3'UTR
MR147_5	3HSAA061955	<i>FBXO9</i>	3'UTR	MR288_3	3HSAA124026	<i>PGM3</i>	3'UTR
MR147_5	3HSAA061955	<i>FBXO9</i>	3'UTR	MR288_3	3HSAA124026	<i>PGM3</i>	3'UTR
MR147_5	3HSAA061955	<i>FBXO9</i>	3'UTR	MR288_3	3HSAA124026	<i>PGM3</i>	3'UTR
MR147_3	3HSAA058037	<i>EXOC7</i>	3'UTR	MR288_3	3HSAA124051	<i>PGM3</i>	3'UTR

Supplementary Table 3 The target of the putative virus miRNAs on 3'-UTR and 5'-UTR (continued)

ID	3'UTR ID	Gene name	UTR	ID	3'UTR ID	Gene name	UTR
MR288_3	3HSAA124026	<i>PGM3</i>	3'UTR	MR359_5	3HSAA068172	<i>GHR</i>	3'UTR
MR288_3	3HSAA157029	<i>SLC30A10</i>	3'UTR	MR359_5	3HSAA068173	<i>GHR</i>	3'UTR
MR345_5	3HSAA042370	<i>CUL3</i>	3'UTR	MR359_5	3HSAA172578	<i>TIFA</i>	3'UTR
MR345_5	3HSAA042356	<i>CUL3</i>	3'UTR	MR359_5	3HSAA172578	<i>TIFA</i>	3'UTR
MR345_5	3HSAA042384	<i>CUL3</i>	3'UTR	MR359_5	3HSAA172577	<i>TIFA</i>	3'UTR
MR345_5	3HSAA042356	<i>CUL3</i>	3'UTR	MR369_3	3HSAA006209	<i>ALDH1L2</i>	3'UTR
MR345_5	3HSAA042360	<i>CUL3</i>	3'UTR	MR369_3	3HSAA006208	<i>ALDH1L2</i>	3'UTR
MR345_5	3HSAA042365	<i>CUL3</i>	3'UTR	MR369_3	3HSAA006210	<i>ALDH1L2</i>	3'UTR
MR345_5	3HSAA042368	<i>CUL3</i>	3'UTR	MR375_5	3HSAA062224	<i>FCHSD1</i>	3'UTR
MR345_5	3HSAA042362	<i>CUL3</i>	3'UTR	MR375_5	3HSAA062218	<i>FCHSD1</i>	3'UTR
MR345_5	3HSAA042371	<i>CUL3</i>	3'UTR	MR375_5	3HSAA053021	<i>EHD4</i>	3'UTR
MR345_5	3HSAA042369	<i>CUL3</i>	3'UTR	MR375_5	3HSAA053020	<i>EHD4</i>	3'UTR
MR345_5	3HSAA042364	<i>CUL3</i>	3'UTR	MR375_3	3HSAA012181	<i>ASCL1</i>	3'UTR
MR345_5	3HSAA042366	<i>CUL3</i>	3'UTR	MR375_3	3HSAA146430	<i>RS1</i>	3'UTR
MR345_5	3HSAA042383	<i>CUL3</i>	3'UTR	MR375_3	3HSAA085320	<i>KDELRL2</i>	3'UTR
MR345_5	3HSAA042358	<i>CUL3</i>	3'UTR	MR375_3	3HSAA085315	<i>KDELRL2</i>	3'UTR
MR345_5	3HSAA042363	<i>CUL3</i>	3'UTR	MR375_3	3HSAA180445	<i>TTF2</i>	3'UTR
MR345_5	3HSAA042361	<i>CUL3</i>	3'UTR	MR385_5	3HSAA162890	<i>SPINLWI</i>	3'UTR
MR345_5	3HSAA042358	<i>CUL3</i>	3'UTR	MR385_3	3HSAA144566	<i>RP11-35N6.1</i>	3'UTR
MR345_5	3HSAA093215	<i>LRFN4</i>	3'UTR	MR385_3	3HSAA144565	<i>RP11-35N6.1</i>	3'UTR
MR345_5	3HSAA004226	<i>ADIPOQ</i>	3'UTR	MR385_3	3HSAA029198	<i>CCDC74A</i>	3'UTR
MR345_5	3HSAA153832	<i>SH2D1B</i>	3'UTR	MR385_3	3HSAA029198	<i>CCDC74A</i>	3'UTR
MR345_5	3HSAA042740	<i>CXORF48</i>	3'UTR	MR385_3	3HSAA029201	<i>CCDC74B</i>	3'UTR
MR345_5	3HSAA042741	<i>CXORF48</i>	3'UTR	MR385_3	3HSAA029203	<i>CCDC74B</i>	3'UTR
MR345_3	3HSAA143118	<i>RNASE11</i>	3'UTR	MR385_3	3HSAA029204	<i>CCDC74B</i>	3'UTR
MR345_3	3HSAA143119	<i>RNASE11</i>	3'UTR	MR385_3	3HSAA081562	<i>ILDR2</i>	3'UTR
MR345_3	3HSAA143119	<i>RNASE11</i>	3'UTR	MR385_3	3HSAA078435	<i>HPCAL4</i>	3'UTR
MR345_3	3HSAA143119	<i>RNASE11</i>	3'UTR	MR385_3	3HSAA078437	<i>HPCAL4</i>	3'UTR
MR345_3	3HSAA143119	<i>RNASE11</i>	3'UTR	MR385_3	3HSAA078436	<i>HPCAL4</i>	3'UTR
MR345_3	3HSAA143119	<i>RNASE11</i>	3'UTR	MR385_3	3HSAA078438	<i>HPCAL4</i>	3'UTR
MR345_3	3HSAA143119	<i>RNASE11</i>	3'UTR	MR385_3	3HSAA180414	<i>TTC9</i>	3'UTR
MR345_3	3HSAA143119	<i>RNASE11</i>	3'UTR	MR66_5	3HSAA141675	<i>RFC1</i>	3'UTR
MR345_3	3HSAA143119	<i>RNASE11</i>	3'UTR	MR66_5	3HSAA141676	<i>RFC1</i>	3'UTR
MR345_3	3HSAA193272	<i>ZNF549</i>	3'UTR	MR66_5	3HSAA141691	<i>RFC1</i>	3'UTR
MR345_3	3HSAA193271	<i>ZNF549</i>	3'UTR	MR66_5	3HSAA141677	<i>RFC1</i>	3'UTR
MR345_3	3HSAA140748	<i>RBMX</i>	3'UTR	MR66_5	3HSAA141688	<i>RFC1</i>	3'UTR
MR345_3	3HSAA140752	<i>RBMX</i>	3'UTR	MR66_5	3HSAA141680	<i>RFC1</i>	3'UTR
MR345_3	3HSAA140759	<i>RBMX</i>	3'UTR	MR66_5	3HSAA141681	<i>RFC1</i>	3'UTR
MR359_5	3HSAA064656	<i>FOXO3</i>	3'UTR	MR66_5	3HSAA141703	<i>RFC1</i>	3'UTR
MR359_5	3HSAA064656	<i>FOXO3</i>	3'UTR	MR66_5	3HSAA141710	<i>RFC1</i>	3'UTR

Supplementary Table 3 The target of the putative virus miRNAs on 3'-UTR and 5'-UTR (continued)

ID	3'UTR ID	Gene name	UTR
MR66_5	3HSAA141709	<i>RFC1</i>	3'UTR
MR66_5	3HSAA141710	<i>RFC1</i>	3'UTR
MR66_5	3HSAA141690	<i>RFC1</i>	3'UTR
MR66_5	3HSAA141696	<i>RFC1</i>	3'UTR
MD113_3	5HSAA081686	<i>PMFBP1</i>	5'UTR
MD198_3	5HSAA064861	<i>MED24</i>	5'UTR
MD198_3	5HSAA064862	<i>MED24</i>	5'UTR
MD198_3	5HSAA064863	<i>MED24</i>	5'UTR
MD198_3	5HSAA064864	<i>MED24</i>	5'UTR
MD198_3	5HSAA064864	<i>MED24</i>	5'UTR
MD198_3	5HSAA064864	<i>MED24</i>	5'UTR
MD198_3	5HSAA064873	<i>MED24</i>	5'UTR
MD198_3	5HSAA064860	<i>MED24</i>	5'UTR
MD198_3	5HSAA064863	<i>MED24</i>	5'UTR
MD198_3	5HSAA064864	<i>MED24</i>	5'UTR
MD198_3	5HSAA064876	<i>MED24</i>	5'UTR
MD2_5	5HSAA035513	<i>ENOX1</i>	5'UTR
MD2_5	5HSAA035502	<i>ENOX1</i>	5'UTR
MD2_5	5HSAA035513	<i>ENOX1</i>	5'UTR
MD2_5	5HSAA035502	<i>ENOX1</i>	5'UTR
MD2_5	5HSAA035491	<i>ENOX1</i>	5'UTR
MD251_5	5HSAA084890	<i>PRMT3</i>	5'UTR
MD251_5	5HSAA084890	<i>PRMT3</i>	5'UTR
MD330_3	5HSAA053412	<i>IP6K1</i>	5'UTR
MD387_3	5HSAA014015	<i>CIS</i>	5'UTR
MD387_3	5HSAA075226	<i>OPTN</i>	5'UTR
MD387_3	5HSAA075231	<i>OPTN</i>	5'UTR
MD387_3	5HSAA075228	<i>OPTN</i>	5'UTR
MD387_3	5HSAA075215	<i>OPTN</i>	5'UTR
MD40_3	5HSAA030114	<i>DHRS9</i>	5'UTR
MD6_3	5HSAA059760	<i>LOC440295</i>	5'UTR
MD78_5	5HSAA095257	<i>SCUBE3</i>	5'UTR
MR385_5	5HSAA010350	<i>BCL9</i>	5'UTR
MR385_3	5HSAA013663	<i>C1ORF168</i>	5'UTR
MR385_3	5HSAA013659	<i>C1ORF168</i>	5'UTR
MR385_3	5HSAA013661	<i>C1ORF168</i>	5'UTR
MR385_3	5HSAA108849	<i>TGFBR3</i>	5'UTR

Supplementary Table 4 The target of virus miRNAs on enhancer in four tissues

ID	Gene name	Tissues
MD113_3	<i>GALNT10</i>	Spleen
MD113_3	<i>SAP30L</i>	Spleen
MD129_5	<i>AC016722.1</i>	Lung
MD172_3	<i>CREG1</i>	Gut
MD172_3	<i>GPA33</i>	Gut
MD172_3	<i>POGK</i>	Gut
MD172_5	<i>PROSER2</i>	Lung; Spleen
MD198_3	<i>ADAR</i>	Liver
MD198_3	<i>ATP5IF1</i>	Liver
MD198_3	<i>CDR2</i>	Lung
MD198_3	<i>DBNDD2</i>	Liver
MD198_3	<i>DNAJC8</i>	Liver
MD198_3	<i>DTNB-AS1</i>	Spleen
MD198_3	<i>DYNLT1</i>	Spleen
MD198_3	<i>NCOA5</i>	Gut; Liver
MD198_3	<i>PHACTR4</i>	Liver
MD198_3	<i>POMC</i>	Spleen
MD198_3	<i>RIN2</i>	Lung
MD198_3	<i>RRN3P3</i>	Lung
MD198_3	<i>SLC35C2</i>	Liver
MD198_3	<i>ZNF770</i>	Lung
MD198_3	<i>ZSWIM3</i>	Gut; Liver
MD2_3	<i>JAKMIP3</i>	Spleen
MD2_5	<i>CACNA1C</i>	Lung; Spleen
MD202_5	<i>ATP13A1</i>	Liver
MD202_5	<i>GATAD2A</i>	Spleen
MD202_5	<i>HERPUD1</i>	Lung; Spleen
MD202_5	<i>JCAD</i>	Lung
MD202_5	<i>MTIE</i>	Lung
MD202_5	<i>NDUFA13</i>	Lung; Gut; Liver
MD202_5	<i>NLRC5</i>	Lung; Spleen
MD202_5	<i>RHPN2</i>	Gut
MD202_5	<i>SVIL</i>	Lung
MD202_5	<i>ZNF101</i>	Lung
MD21_3	<i>KRT8</i>	Lung
MD21_3	<i>KRT80</i>	Lung
MD21_3	<i>NR4A1AS</i>	Lung
MD250_5	<i>CLSTN1</i>	Gut
MD255_3	<i>NFATC1</i>	Spleen
MD255_5	<i>ZBED6</i>	Gut
MD255_5	<i>ZC3H11A</i>	Gut
MD266_3	<i>BICDL1</i>	Spleen

Supplementary Table 4 The target of virus miRNAs on enhancer in four tissues (continued)

ID	Gene name	Tissues	ID	Gene name	Tissues
MD284_3	<i>GUSB</i>	Spleen; Gut	MD6_5	<i>CD48</i>	Spleen
MD308_5	<i>SH3RF2</i>	Gut	MD6_5	<i>CDX1</i>	Gut
MD330_5	<i>C12orf43</i>	Lung; Spleen	MD6_5	<i>CSF1R</i>	Lung
MD330_5	<i>EXD2</i>	Lung; Spleen	MD6_5	<i>GRPEL2</i>	Lung; Spleen; Gut
MD330_5	<i>OASL</i>	Lung	MD6_5	<i>PDGFRB</i>	Lung; Gut
MD330_5	<i>PRKAG2</i>	Spleen	MD6_5	<i>PREX1</i>	Lung; Spleen
MD330_5	<i>PXN</i>	Lung	MD6_5	<i>SLAMF6</i>	Spleen
MD330_5	<i>RNF34</i>	Spleen; Gut	MD6_5	<i>SLAMF7</i>	Spleen
MD330_5	<i>WDR86</i>	Spleen	MD68_5	<i>ALI59141.1</i>	Lung; Spleen
MD363_3	<i>TMEM106C</i>	Spleen; Gut	MD68_5	<i>CAPZA2</i>	Lung
MD363_5	<i>COX5A</i>	Gut	MD68_5	<i>CAV2</i>	Lung
MD363_5	<i>CYB5R1</i>	Lung	MD68_5	<i>FHDC1</i>	Lung; Gut
MD363_5	<i>ZBED6</i>	Lung	MD68_5	<i>G3BP2</i>	Lung
MD369_3	<i>ABCD3</i>	Gut	MD68_5	<i>ITGA9</i>	Spleen
MD369_3	<i>AC093585.1</i>	Lung	MD68_5	<i>METRNL</i>	Lung; Spleen
MD369_3	<i>HDLBP</i>	Lung	MD68_5	<i>MND1</i>	Spleen
MD369_5	<i>GABARAP</i>	Lung; Spleen	MD68_5	<i>NDUFB1</i>	Spleen
MD369_5	<i>XAF1</i>	Lung; Spleen	MD68_5	<i>RYBP</i>	Lung
MD387_3	<i>CD27</i>	Spleen	MD68_5	<i>ST7</i>	Lung
MD387_3	<i>ENO2</i>	Spleen	MD68_5	<i>WDR45B</i>	Lung; Spleen
MD387_3	<i>LYRM4</i>	Spleen	MD69_3	<i>DSCAML1</i>	Lung
MD387_3	<i>PPP1R3G</i>	Spleen	MD69_3	<i>FXYD2</i>	Spleen
MD387_5	<i>EFHD2</i>	Gut	MD69_3	<i>JAML</i>	Spleen
MD387_5	<i>MGP</i>	Lung	MD69_3	<i>RP11-728F11.3</i>	Spleen
MD40_3	<i>FOPNL</i>	Spleen	MD69_3	<i>RP3-414A15.10</i>	Lung
MD40_3	<i>IER2</i>	Lung	MD69_5	<i>CANX</i>	Spleen
MD40_3	<i>LYL1</i>	Lung	MD69_5	<i>RP11-1379J22.3</i>	Lung
MD40_3	<i>NFIX</i>	Lung	MD69_5	<i>RUFY1</i>	Spleen
MD40_3	<i>PRDX2</i>	Lung	MD69_5	<i>SQSTM1</i>	Spleen
MD40_3	<i>TM9SF2</i>	Spleen	MD7_5	<i>MYC</i>	Gut
MD40_5	<i>CCR6</i>	Spleen	MD72_5	<i>COL4A2</i>	Lung; Spleen; Gut; Liver
MD40_5	<i>GLRX</i>	Gut	MD78_3	<i>AMFR</i>	Lung; Spleen
MD40_5	<i>NUP214</i>	Spleen	MD78_3	<i>MT1F</i>	Lung; Spleen
MD40_5	<i>RHOG</i>	Spleen	MD78_3	<i>MT1L</i>	Lung; Spleen
MD40_5	<i>UCK1</i>	Spleen	MD78_3	<i>MT1M</i>	Lung; Spleen
MD44_5	<i>HMG2</i>	Lung	MD78_5	<i>STIM2</i>	Lung
MD44_5	<i>SLC9A1</i>	Lung; Gut	MD88_3	<i>OAS1</i>	Spleen
MD44_5	<i>WDTC1</i>	Lung; Gut	MD88_5	<i>ARL2</i>	Lung; Spleen; Gut
MD6_3	<i>KLHL23</i>	Lung	MD88_5	<i>ATG2A</i>	Lung
MD6_5	<i>CCDC126</i>	Lung	MD88_5	<i>NAA40</i>	Lung; Spleen; Gut

Supplementary Table 4 The target of virus miRNAs on enhancer in four tissues (continued)

ID	Gene name	Tissues	ID	Gene name	Tissues
MD88_5	<i>RASGRP2</i>	Lung; Spleen	MR29_3	<i>ACLY</i>	Lung
MR147_3	<i>SLA</i>	Lung	MR29_3	<i>EIF1</i>	Lung
MR147_3	<i>SPEN</i>	Spleen	MR29_3	<i>JUP</i>	Lung
MR147_3	<i>SUMO2</i>	Spleen	MR29_3	<i>SPTLC2</i>	Spleen; Gut
MR147_3	<i>TMPRSS2</i>	Gut	MR328_3	<i>ISCA2</i>	Spleen
MR147_3	<i>WBP2</i>	Spleen	MR328_3	<i>PXYLP1</i>	Lung
MR147_5	<i>ARRB2</i>	Lung; Gut	MR328_3	<i>RASA2</i>	Lung
MR147_5	<i>CXCL16</i>	Lung; Gut	MR328_3	<i>YLPM1</i>	Spleen
MR147_5	<i>GP1BA</i>	Spleen	MR328_5	<i>BTB</i>	Lung
MR147_5	<i>KIF1C</i>	Spleen; Gut	MR328_5	<i>RXRA</i>	Lung; Spleen; Gut; Liver
MR147_5	<i>PLD2</i>	Lung	MR328_5	<i>VAV2</i>	Lung; Liver
MR147_5	<i>PSMB6</i>	Spleen	MR345_3	<i>REMI</i>	Lung
MR147_5	<i>SLC25A11</i>	Gut	MR345_5	<i>LCP2</i>	Spleen
MR147_5	<i>SMTNL2</i>	Lung	MR345_5	<i>MYO1D</i>	Gut
MR147_5	<i>TMED3</i>	Gut	MR359_3	<i>CDX1</i>	Gut
MR147_5	<i>ZFAND6</i>	Gut	MR359_3	<i>NDST1</i>	Gut
MR221_3	<i>CREB3L2</i>	Gut	MR359_3	<i>PDGFRB</i>	Lung; Gut
MR221_3	<i>CSNK1A1</i>	Lung	MR359_3	<i>SYNPO</i>	Lung
MR221_3	<i>NDST1</i>	Gut	MR359_3	<i>TNIP1</i>	Lung
MR221_3	<i>PRORS DIP</i>	Spleen	MR359_5	<i>APOL3</i>	Lung; Spleen
MR221_3	<i>SPTBN1</i>	Spleen	MR359_5	<i>C12orf45</i>	Lung
MR221_5	<i>PLPP3</i>	Lung	MR359_5	<i>MYH9</i>	Lung; Spleen; Gut; Liver
MR221_5	<i>TNFAIP3</i>	Spleen	MR359_5	<i>SLC41A2</i>	Lung
MR230_3	<i>CFL1</i>	Gut	MR369_5	<i>COL4A1</i>	Gut
MR230_3	<i>LMF1</i>	Spleen	MR369_5	<i>COL4A2</i>	Gut
MR230_3	<i>NAALADL1</i>	Gut	MR369_5	<i>ITGB5</i>	Lung
MR230_3	<i>OVOL1</i>	Gut	MR369_5	<i>MUC13</i>	Lung
MR230_3	<i>RNASEH2C</i>	Gut	MR369_5	<i>UMPS</i>	Lung
MR288_3	<i>AC091564.4</i>	Spleen	MR375_3	<i>CDT1</i>	Spleen
MR288_3	<i>ALYREF</i>	Lung	MR375_3	<i>JADE2</i>	Lung; Spleen; Gut
MR288_3	<i>ARFGAP2</i>	Gut	MR375_3	<i>MICALL2</i>	Lung; Spleen
MR288_3	<i>CNKSR3</i>	Lung	MR375_3	<i>PPM1D</i>	Lung
MR288_3	<i>COX4I1</i>	Spleen	MR375_3	<i>PTRH2</i>	Spleen
MR288_3	<i>CYBC1</i>	Lung	MR375_3	<i>RP11-216C10.1</i>	Lung
MR288_3	<i>DCHS1</i>	Lung	MR375_3	<i>SAR1B</i>	Gut
MR288_3	<i>MRPL17</i>	Spleen	MR375_3	<i>TGFBR2</i>	Spleen
MR288_3	<i>PCYT2</i>	Lung	MR375_5	<i>ATP2B4</i>	Lung
MR288_3	<i>TAF10</i>	Lung; Spleen	MR375_5	<i>CHGB</i>	Gut
MR288_5	<i>ASL</i>	Spleen	MR375_5	<i>CRLS1</i>	Gut
MR288_5	<i>CIITA</i>	Lung	MR375_5	<i>SHLD1</i>	Gut

Supplementary Table 4 The target of virus miRNAs on enhancer in four tissues (continued)

ID	Gene name	Tissues
MR385_3	<i>CCR6</i>	Spleen
MR385_3	<i>GMFG</i>	Liver
MR385_3	<i>LRFN1</i>	Lung; Spleen; Gut; Heart
MR385_3	<i>MED29</i>	Liver
MR385_3	<i>PAF1</i>	Liver
MR385_3	<i>PLEKHG2</i>	Spleen; Liver
MR385_3	<i>RPS16</i>	Spleen; Liver
MR385_3	<i>TNFRSF1B</i>	Lung
MR385_3	<i>ZFP36</i>	Liver
MR385_5	<i>ACAA1</i>	Lung; Spleen
MR385_5	<i>GNB5</i>	Lung
MR385_5	<i>MAPK6</i>	Lung
MR385_5	<i>TMEM98</i>	Gut
MR385_5	<i>TNS3</i>	Lung
MR385_5	<i>VILL</i>	Spleen
MR66_3	<i>DDX39B</i>	Spleen

Supplementary Table 4 The target of virus miRNAs on enhancer in four tissues (continued)

ID	Gene name	Tissues
MR66_3	<i>HCP5</i>	Spleen
MR66_3	<i>LTA</i>	Spleen
MR66_3	<i>TNF</i>	Spleen

Supplementary Table 5 The target genes of four validated miRNAs in the green monkey

ID	UTR ID	Gene name
MR147_3	3CSAR000062583	<i>LOC103242070</i>
MR369_3	5CSAR000039386	<i>LOC103217999</i>
MR359_5	3CSAR000054459	<i>FOXO3</i>
MR359_5	3CSAR000054461	<i>FOXO3</i>
MR359_5	3CSAR000024521	<i>GHR</i>
MR359_5	3CSAR000024520	<i>GHR</i>
MR359_5	3CSAR000032047	<i>TIFA</i>
MR359_5	5CSAR000038417	<i>GPR1</i>

Supplementary Table 6 The target of host miRNAs on the virus genome

ID	Virus genome start	Virus genome end	Regulated genes predicted in TargetScan database
hsa-miR-10398-3p	5177	5197	NA
hsa-miR-1181	28549	28569	RBP7
hsa-miR-1229-5p	28390	28413	<i>AC004076.7;AL645730.2;C6orf123;CA10;CDKL4;CHGB;CLIC1;CTNNBIP1;EDDM3A;HCRTR1;HMGNA4;MTRNR2L10;MTRNR2L11;MTRNR2L3;MTRNR2L7;NICN1;RBMXL3;RNF148;S100A9;SMR3A;SMR3B;SPPL2C;STEAP1B</i>
hsa-miR-1292-5p	25774	25799	<i>APBB1IP;BAD;BMP4;CAPN5;CCDC151;DEK;IRF1;MICAL1;TUBGCP4;UCMA;VASP;ZNF23</i>
hsa-miR-1307-3p	29727	29748	<i>AL589765.1;AL591479.1;CABP1;LTB;PRKCZ;PRM2;RP9;TAGLN3;UNC93B1;VPS37C</i>
hsa-miR-146b-3p	13516	13541	<i>ANPEP;BCL2L15;BTBD11;CCDC101;CCNE1;CCS;CD247;CD79B;CHI3L2;CHP1;CLCNKA;CLCNKB;CTB-129P6.11;CYorf17;DYNLL1;GBA2;GIMAP6;GOT2;IDI2;IL1A;MAGEC2;MMP3;MUC19;OPRD1;PARK7;PRKCH;PRSS8;RGS4;RXRB;SMIM9;SPACA7;TFRC;TMEFF2;TUBD1;ZDHHC16</i>
hsa-miR-193a-5p	6376	6397	<i>BLID;CD27;CEBPG;CTD-2207023.12;CTRL;CXorf67;DHRS4-AS1;DMRT2;DSCAML1;FAM218A;GANAB;HLA-F;HYKK;IQCF6;KDEL3;KIF18A;KLK12;KRTAP5-9;LCN15;MTIG;NANOS3;NBPF8;NCR1;NLN;OTOR;RP11-1102P16.1;RP11-127H5.1;RPS2;SPANXN5;TMUB2;TRAT1;UBE2D2;VEGFB</i>
hsa-miR-3154	17119	17140	<i>AC102948.2;AL354993.1;ANKRD30BL;CCT6B;CDH26;CMTM7;COQ10A;CTSK;DTD2;FAM181B;GML;GPHA2;HTR3C;KLK12;KRTAP10-7;KRTAP4-7;LRRC39;MTM1;NGF;OST4;SPACA4;TMOD4</i>
hsa-miR-3191-3p	1170	1192	<i>AC090616.2;AKR1B1;BRICD5;CNIH3;COX6B2;CYP4F31P;DDX31;DTYMK;DUSP15;E2F5;EVL;FGF18;FN3K;FOXP3;GABRG3;GBX2;GJB6;GPX3;HAMP;HBEGF;LCN6;LIMS2;MARCH10;MESPI;NFKB2;NHLRC4;PI3;PMM1;RAB11B;RAX;RGS9BP;SERTM1;SLC12A5;SPHK2;TFF1</i>
hsa-miR-324-3p	28344	28375	<i>AL591479.1;ARL16;ARMC7;ASNA1;BSCL2;C16orf90;C1orf216;C1orf228;C20orf202;C9orf24;CCL18;CGREF1;CYHR1;DEFB132;DIABLO;DUSP1;EFEMP2;ELTD1;ESAM;GHITM;GNAZ;ICAM4;ID4;IL17A;KLF17;LAMB3;LST1;LYRM9;MUC16;MYO1E;NMNAT3;NMRAL1;NUPR1;OGFOD2;ORAI1;PFDN5;PI16;PPP4R4;PRRX2;SDF2;SLC24A5;SMIM3;TMEM239;TMEM249;TMEM251;TMUB1;TRIM16;TSEN54;VWA1;WWOX;ZNF256</i>

Supplementary Table 6 The target of host miRNAs on the virus genome (continued)

ID	Virus genome start	Virus genome end	Regulated genes predicted in TargetScan database
hsa-miR-3648	21143	21162	<i>CRYAA;GSTM2;ITFG3;LPL;RPRM;TBC1D10C;ZNF787</i>
hsa-miR-370-3p	15468	15489	<i>AC009892.10;AC107021.1;ASPSCR1;ATPAF2;BEX2;CCDC69;COMMD7;GOLGA6L4;GPR119;HDDC2;HRASLS2;NKAPL;NUDT2;PMAIP1;RBP1;RP11-451M19.3;RP9;SGCZ;TBC1D29;TPO</i>
hsa-miR-4259	28325	28346	<i>ADRA1A;ANKDD1A;ARHGEF39;C10orf126;C3orf35;CALML4;CCL28;CCL5;CD151;CORIN;FAAH;FAM136A;FAM217A;FOLR1;GPR119;GPR31;GRAPL;LCA10;LINC00999;LRMP;MEOX1;MT-ATP6;MT-ATP8;NXPE4;PDZD7;POC1B-GALNT4;PRLHR;PRPF38A;RP11-315D16.2;SERPINH1;SULT1C2;TCEAL3;TCEAL5;TCEAL6;TM4SF1</i>
hsa-miR-4526	12658	12679	<i>AC027763.2;BEX5;C16orf87;IFT122;MAD2L2;MRPS9;PDE6H;RAP1A;RP11-1167A19.2;SPATA22</i>
hsa-miR-4661-3p	25296	25320	<i>AARD;C6orf123;COX6B1;CPB2;CSRPI;CYP11B2;CYSLTR2;EMC1;HIST1H2AC;HLA-DMB;HOGA1;IDO2;IFRG15;IGSF8;IVL;KIAA1279;KTI12;LAMTOR5;NAPG;NDUFS3;NTAN1;NUDCD2;OR51D1;ORC6;RP11-162A12.2;RP11-272B17.2;RPL18;RSG1;SLC25A23;SLC7A13</i>
hsa-miR-4738-3p	181	204	<i>COX7A2;GLIPR2;KBTBD4;LIPT1;MYEOV2;RBM42;SMIM2;SPP2</i>
hsa-miR-4758-5p	11000	11022	<i>AKR1B15;AL353698.1;ANKRD61;APOM;C9orf89;FAM154A;GTF2H5;HYLS1;LETM2;MLKL;NDUFV3;POLR2H;RLN3;RNF224;RP11-463J10.2;RP11-650K20.3;SEC31A;SMIM3;VDAC1</i>
hsa-miR-4758-5p	28426	28447	<i>AKR1B15;AL353698.1;ANKRD61;APOM;C9orf89;FAM154A;GTF2H5;HYLS1;LETM2;MLKL;NDUFV3;POLR2H;RLN3;RNF224;RP11-463J10.2;RP11-650K20.3;SEC31A;SMIM3;VDAC1</i>
hsa-miR-4786-3p	28615	28638	<i>AC020922.1;APEX1;APOBEC3A;ARL15;ATP6V1D;C16orf86;CCL1;FOXRED1;HDAC2;HSPB2;KHDC1;KRTAP19-6;NUF2;OIP5;OR10AG1;OR2A25;OR8I2;PA2G4;PRKRA;PSMC2;SKA2;SLC47A2;SNCA;TBC1D17;TMEM258;UGT2B11;UGT2B17</i>
hsa-miR-602	187	212	<i>B3GNT9;C11orf88;C16orf45;CSAR1;C9orf170;DTX3;FXYP7;GNG2;HOXB8;ORMDL1;PRMT2;SEMG1;SMOC1;TESK1;TEX35;TMEM133;TMEM229A</i>
hsa-miR-602	27982	28005	<i>B3GNT9;C11orf88;C16orf45;CSAR1;C9orf170;DTX3;FXYP7;GNG2;HOXB8;ORMDL1;PRMT2;SEMG1;SMOC1;TESK1;TEX35;TMEM133;TMEM229A</i>
hsa-miR-623	8166	8187	<i>C19orf59;CD163;DEFB134;DLEU2L;FAM210A;KARS;LY6G6D;LY6G6F;MEGT1;NOP58;NUPL2;OR2G6;OR5AU1;SLC25A29;SPZ1;TBC1D29;VIMP</i>
hsa-miR-6751-5p	25497	25519	<i>AC024940.1;AC117395.1;AL645730.2;ALDH1A1;ALG13;ANAPC15;ANXA2;ARHGDIG;BSPH1;CIQB;C4orf40;CAPB5;CACNG6;CAPS;CBLN1;CCDC81;CCL1;CITED2;CLIP3;CNIH2;CNOT2;CPN2;DCXR;DEFB118;DGAT2L6;DNAJB5;DSCAML1;EFCAB13;EPHX1;FABP1;FCAMR;FCER1G;FCER2;FCGR2A;FGF17;GAPT;GNA14;HPS5;hsa-mir-1199;HSD11B2;ID3;IL17F;KIF4B;KLK1;KLK4;KRTAP17-1;LDHA;LHFPL1;LSM2;LYSMD3;MAGEB2;MGC10955;MRP63;NAPA;NOXA1;NPDC1;NPM2;NUDT18;NUDT5;PAF1;PATE4;PAXIP1-AS2;PHOX2B;PIN1;PLEKHB1;PORCN;PPAPDC3;PRR3;RNF34;RP11-343C2.12;RP11-422N16.3;RP11-712L6.5;SARDH;SDHAF1;SFTA3;SIX3;SLC22A1;SLC3A2;SPACA1;SPRR1B;SSC5D;TMEM51;TNFAIP8L2;TPK1;TRAPPC4;TRIML1;U2AF1L4;UTS2;VEGFB;VSTM1;ZFAND1;ZNF474</i>
hsa-miR-6774-5p	11737	11762	<i>AL627171.2;APEX1;ARFIP2;BTBD1;C1orf131;C6orf136;CCDC6;CCL20;CD1B;CD69;CISD3;CNBD2;COA3;CUTC;CXorf24;CYC1;DSN1;FAM153C;FDX1L;FGFBP2;GJD4;GPR183;GREM1;HSD11B1L;JMJD6;LCA10;LCE2A;LTA;MANBAL;MPPE1;MRPL11;MRPS18B;MTFP1;MT-ND4L;MYBPH;NAPA;NDRG3;NDUFAF7;NFKBIB;NXF3;P4HTM;PBXIP1;PIGZ;PREB;PRM2;PRNT;PTPRM;RIT2;RSPH10B2;SDS;SGTB;SLC26A6;SMIM2;SPRR4;SSBP3-AS1;SYCE1;TMEM216;TMEM92;UBE2D3;VHLL;ZNF138;ZNF530</i>
hsa-miR-6827-5p	834	855	<i>AC090616.2;ACSBG2;AL589765.1;ANO10;ANTXR1;ARL15;BLOC1S1;C10orf105;C12orf44;C17orf66;C19orf10;C22orf39;C7orf41;CACNB3;CETP;CTA-299D3.8;ESAM;FAM89B;FBXL12;FBXO16;FTSJ2;GRIA4;HIST2H3A;HIST2H3C;HSPB8;IL1RN;INCA1;INHA;LAD1;LINC00908;LRTOMT;LY6G6C;LYRM4;MRPL4;MRPS2;MSMB;MYLPF;MYO22;NDUFA3;NDUFAF2;NKX2-5;OSGIN1;PARP10;PCNP;PEPD;PGAM1;PGAM4;PLAUR;POLD4;PPCS;PPP1R14B;PRKCG;PRSS8;PSG4;PTGES;RAB15;RAB17;RAB5B;RBPM5;REEP6;RHOC;RNF122;RNF224;RP11-113D6.10;RPL22;SCIMP;SMARCB1;SRR;SYNGR2;TEC;TEX264;THBS3;TIMM8A;TMEM140;TNIN2;TNS4;VIMP;ZMYND19;ZNF235;ZNF467</i>
hsa-miR-6834-5p	19008	19029	<i>AC144568.2;ATP6V1G2;C17orf72;C22orf39;C9orf57;CNN3;FOXD4L3;GPR183;HCFC1R1;HIST1H2AC;KCNF1;MED30;OR2B6;PDE6D;PSORS1C1;RNASE1;RP11-404P21.8;RP11-433C9.2;SLC51A;SLC52A2;SSI8L2;SUMO1;TYMS</i>

Supplementary Table 6 The target of host miRNAs on the virus genome (continued)

ID	virus genome start	virus genome end	Regulated genes predicted in TargetScan database
hsa-miR-6882-3p	28788	28811	<i>AKIRIN2;ARID5A;ATP4B;C17orf58;C18orf56;CABP2;CCL21;CDK13;CREM;CYP39A1;GALNT9;GLYF2;GLIPR2;GPATCH4;GYG1;ICAM2;IGSF1;IL24;KIF12;KLK8;MFAP3;MRPL9;NFKB1B;NGB;PID1;RAB32;RNF146;RPS21;RSL24D1;SLC22A9;TARBP2;TATDN2;TBG1;TCF7;TFRC;TSFM;VEGFB;ZKSCAN1</i>
hsa-miR-7161-3p	356	381	<i>ATP6V1G2;EEF1E1;LIPJ;NHLRC3;OR8D4;PCOLCE2;PIGX;RP11-9B6.1;SPZ1;TMEM243;TREML1;TYR;ZNF600</i>
hsa-miR-8075	14770	14794	NA
hsa-miR-939-5p	12096	12118	NA