Supplementary Materials for

In vivo fermentation production of humanized noncoding RNAs carrying payload miRNAs for targeted anticancer therapy

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Table S1. Sequences of humanized recombinant ncRNAs bearing RNAi warheads. Underlined, tRNA; Red and green: payload miRNA or siRNA sequence and complementary sequence, respectively; orange, aptamer.

Target ncRNA	# nts	Sequence (5' to 3')	MW (Da)
htRNA/pre-miR-34a			
htRNA^{Lys}/pre-miR-34a	182	GCCUGGAUAGCUCAGUUGGUAGAGCAUCAGACUGGCCAGCU GUGAGUGUUUCUUUGGCAGUGUCUUAGCUGGUUGUUGUGAG CAAUAGUAAGGAAGCAAUCAGCAAGUAUACUGCCCUAGAAGU GCUGCACGUUGUUGGCCCAAUCUGAGGGUCCAGGGUUCAAG UCCCUGUUCAGGCGCCA	58,889
htRNA^{Gln}/pre-miR-34a	181	GGUCCCAUGGUGUAAUGGUUAGCACUCUGGACUGGCCAGCU GUGAGUGUUUCUUUGGCAGUGUCUUAGCUGGUUGUUGUGAG CAAUAGUAAGGAAGCAAUCAGCAAGUAUACUGCCCUAGAAGU GCUGCACGUUGUUGGCCCAAUCCAGCGAUCCGAGUUCAAAUC UCGGUGGGACCUCCA	58,465
htRNA^{Cys}/pre-miR-34a	181	GGGGGCAUAGCUCAGUGGUAGAGCAUUUGACUGGCCAGCUG UGAGUGUUUCUUUGGCAGUGUCUUAGCUGGUUGUUGUGAGC AAUAGUAAGGAAGCAAUCAGCAAGUAUACUGCCCUAGAAGUG CUGCACGUUGUUGGCCCGAUCAAGAGGUCCCUGGUUCAAAU CCAGGUGCCCCCUCCA	58,543
htRNA^{Tyr}/pre-miR-34a	182	CCUUCGAUAGCUCAGUUGGUAGAGCGGAGGACUGGCCAGCU GUGAGUGUUUCUUUGGCAGUGUCUUAGCUGGUUGUUGUGAG CAAUAGUAAGGAAGCAAUCAGCAAGUAUACUGCCCUAGAAGU GCUGCACGUUGUUGGCCCGAUCCUUAGGUCGCUGGUUCGAA UCCGGCUCGAAGGACCA	58,905
htRNA^{Ser}/pre-miR-34a	191	GCAGCGAUGGCCGAGUGGUUAAGGCGUUGGACUGGCCAGCU GUGAGUGUUUCUUUGGCAGUGUCUUAGCUGGUUGUUGUGAG CAAUAGUAAGGAAGCAAUCAGCAAGUAUACUGCCCUAGAAGU GCUGCACGUUGUUGGCCCAAUCCAAUGGGGUCUCCCCGCGC AGGUUCGAACCCUGCUCGCUGCGCCA	61,787
htRNA^{Leu}/pre-miR-34a	192	ACCAGGAUGGCCGAGUGGUUAAGGCGUUGGACUGGCCAGCU GUGAGUGUUUCUUUGGCAGUGUCUUAGCUGGUUGUUGUGAG CAAUAGUAAGGAAGCAAUCAGCAAGUAUACUGCCCUAGAAGU GCUGCACGUUGUUGGCCCGAUCCAAUGGACAUAUGUCCGCG UGGGUUCGAACCCCACUCCUGGUACCA	62,110
htRNA^{Leu}/pre-miR-34a			
htRNA^{Leu}/sephadex-aptamer	119	ACCAGGAUGGCCGAGUGGUUAAGGCGUUGGACUAGUAAUUU ACGUCGACGGUGACGUCGAUGGUUGCGGGAUCCAAUGGACA UAUGUCCGCGUGGGUUCGAACCCCACUCCUGGUACCA	38,625
htRNA^{Leu}/pre-miR-34a/miR-200b-3p	192	ACCAGGAUGGCCGAGUGGUUAAGGCGUUGGACUGGCCAGCU GUGAGUGUUUCUUUAAUACUGCCUGGUAAUGAUGAUGUGAG CAAUAGUAAGGAAUCAUCAUUAUAGUGCAGUAUUCUAGAAGU GCUGCACGUUGUUGGCCCGAUCCAAUGGACAUAUGUCCGCG UGGGUUCGAACCCCACUCCUGGUACCA	62,049
htRNA^{Leu}/pre-miR-34a/miR-148-3p	192	ACCAGGAUGGCCGAGUGGUUAAGGCGUUGGACUGGCCAGCU GUGAGUGUUUCUUUCAGUGCACUACAGAACUUUGUUGUGAG CAAUAGUAAGGAAGCAAAGUUCGUAUGUGCACUGCUAGAAGU GCUGCACGUUGUUGGCCCGAUCCAAUGGACAUAUGUCCGCG UGGGUUCGAACCCCACUCCUGGUACCA	62,078
htRNA^{Leu}/pre-miR-34a/miR-22-3p	192	ACCAGGAUGGCCGAGUGGUUAAGGCGUUGGACUGGCCAGCU GUGAGUGUUUCUUAAGCUGCCAGUUGAAGAACUGUUGUGAG CAAUAGUAAGGAAGCAGUUCUUAGCUUGGCAGCUCUAGAAGU GCUGCACGUUGUUGGCCCGAUCCAAUGGACAUAUGUCCGCG UGGGUUCGAACCCCACUCCUGGUACCA	62,133
htRNA^{Leu}/pre-miR-34a/miR-6775-3p	192	ACCAGGAUGGCCGAGUGGUUAAGGCGUUGGACUGGCCAGCU GUGAGUGUUUCUUAGGCCCUGUCCUCUGCCCCAGUUGUGAG CAAUAGUAAGGAAGCUGGGGCAAGGCGCAGGGCCCUAGAAG	62,167

htRNA^{Leu}/pre-miR-34a/miR-133a-3p	193	UGCUGCACGUUGUUGGCCCGAUCCAAUGGACAUAUGUCCGC GUGGGUUCGAACCCCACUCCUGGUACCA ACCAGGAUGGCCGAGUGGUUAAGGCGUUGGACUGGCCAGCU GUGAGUGUUUCUUUUUGGUCCCCUUCAACCAGCUGUGUGAG CAAUAGUAAGGAAGCAGCUGGUUAAGUGGGACCAACUAGAAG UGCUGCACGUUGUUGGCCCGAUCCAAUGGACAUAUGUCCGC GUGGGUUCGAACCCCACUCCUGGUACCA	62,413
htRNA^{Leu}/pre-miR-34a/miR-124-3p	192	ACCAGGAUGGCCGAGUGGUUAAGGCGUUGGACUGGCCAGCU GUGAGUGUUUCUUUAAGGCACGCGGUGAAUGCCGUUGUGAG CAAUAGUAAGGAAGCGGUGUUCCCGUCGUGCCUUCUAGAAG UGCUGCACGUUGUUGGCCCGAUCCAAUGGACAUAUGUCCGC GUGGGUUCGAACCCCACUCCUGGUACCA	62,132
htRNA^{Leu}/pre-miR-34a/let-7c-5p	193	ACCAGGAUGGCCGAGUGGUUAAGGCGUUGGACUGGCCAGCU GUGAGUGUUUCUUUGAGGUAGUAGGUUGUAUGGUUUGUGAG CAAUAGUAAGGAAGAACUGUACACCUUACUACCUUUCAGAAG UGCUGCACGUUGUUGGCCCGAUCCAAUGGACAUAUGUCCGC GUGGGUUCGAACCCCACUCCUGGUACCA	62,402
htRNA^{Leu}/pre-miR-34a/NRF2-siRNA	192	ACCAGGAUGGCCGAGUGGUUAAGGCGUUGGACUGGCCAGCU GUGAGUGUUUCUUUAAUUGUCAACUACUGUCAGUUUGUGAG CAAUAGUAAGGAAAACUGACAGAGUAUGACAAUUCUAGAAGU GCUGCACGUUGUUGGCCCGAUCCAAUGGACAUAUGUCCGCG UGGGUUCGAACCCCACUCCUGGUACCA	62,055
htRNA^{Leu}/pre-miR-34a/miR-122-5p	193	ACCAGGAUGGCCGAGUGGUUAAGGCGUUGGACUGGCCAGCU GUGAGUGUUUCUUUGGAGUGUGACAAUGGUGUUUGUGUGAG CAAUAGUAAGGAAGCAAACGCCAUGUACACACUCCCUAGAAG UGCUGCACGUUGUUGGCCCGAUCCAAUGGACAUAUGUCCGC GUGGGUUCGAACCCCACUCCUGGUACCA	62,461
htRNA^{Leu}/pre-miR-34a/miR-328-3p	192	ACCAGGAUGGCCGAGUGGUUAAGGCGUUGGACUGGCCAGCU GUGAGUGUUUCUUCUGGCCCUCUCUGCCCUUCCGUUGUGAG CAAUAGUAAGGAAGCGGGGGGGGAGAUGGGGGCCAUUAGAAG UGCUGCACGUUGUUGGCCCGAUCCAAUGGACAUAUGUCCGC GUGGGUUCGAACCCCACUCCUGGUACCA	62,202
htRNA^{Leu}/pre-miR-34a/miR-7-1-5p	192	ACCAGGAUGGCCGAGUGGUUAAGGCGUUGGACUGGCCAGCU GUGAGUGUUUCUUUGGAAGACUAGUGAUUUUGUUGUGUGAG CAAUAGUAAGGAACAACAAAAUACUCAGUCUUCCCUAGAAGU GCUGCACGUUGUUGGCCCGAUCCAAUGGACAUAUGUCCGCG UGGGUUCGAACCCCACUCCUGGUACCA	62,047
htRNA^{Leu}/pre-miR-34a/miR-92a-3p	192	ACCAGGAUGGCCGAGUGGUUAAGGCGUUGGACUGGCCAGCU GUGAGUGUUUCUUUAUUGCACUUGUCCCGGCCUGUUGUGAG CAAUAGUAAGGAAACAGGCCGGACAUAGUGCAAUCUAGAAGU GCUGCACGUUGUUGGCCCGAUCCAAUGGACAUAUGUCCGCG UGGGUUCGAACCCCACUCCUGGUACCA	62,068
htRNA^{Leu}/pre-miR-34a/miR-126-3p	192	ACCAGGAUGGCCGAGUGGUUAAGGCGUUGGACUGGCCAGCU GUGAGUGUUUCUUUCGUACCGUGAGUAAUAAUGCGUGUGAG CAAUAGUAAGGAAUGCAUUAUUCUCUAUGGUACGCUAGAAGU GCUGCACGUUGUUGGCCCGAUCCAAUGGACAUAUGUCCGCG UGGGUUCGAACCCCACUCCUGGUACCA	62,056
htRNA^{Leu}/pre-miR-34a/miR-132-3p	192	ACCAGGAUGGCCGAGUGGUUAAGGCGUUGGACUGGCCAGCU GUGAGUGUUUCUUUAACAGUCUACAGCCAUGGUCGUGUGAG CAAUAGUAAGGAACGACCGUGGUGUCAGAUUGUUCUAGAAGU GCUGCACGUUGUUGGCCCGAUCCAAUGGACAUAUGUCCGCG UGGGUUCGAACCCCACUCCUGGUACCA	62,109
htRNA^{Leu}/pre-miR-34a/miR-137-3p	192	ACCAGGAUGGCCGAGUGGUUAAGGCGUUGGACUGGCCAGCU GUGAGUGUUUCUUUUAUUGCUUAAGAAUACGCGUAGGUGAG CAAUAGUAAGGACUACGCGUAUCUUCGGGUGGUACUAGAAGU GCUGCACGUUGUUGGCCCGAUCCAAUGGACAUAUGUCCGCG UGGGUUCGAACCCCACUCCUGGUACCA	62,111
htRNA^{Leu}/pre-miR-34a/miR-140-5p	192	ACCAGGAUGGCCGAGUGGUUAAGGCGUUGGACUGGCCAGCU GUGAGUGUUUCUUCAGUGGUUUUACCCUAUGGUAGUGUGAG CAAUAGUAAGGAACUACCAUAGGUAUAAACCACUCUAGAAGU GCUGCACGUUGUUGGCCCGAUCCAAUGGACAUAUGUCCGCG UGGGUUCGAACCCCACUCCUGGUACCA	62,022

htRNA^{Leu}/pre-miR-34a/miR-141-3p	192	ACCAGGAUGGCCGAGUGGUUAAGGCGUUGGACUGGCCAGCU GUGAGUGUUUCUUUAACACUGUCUGGUAAAGAUGGUGUGAG CAAUAGUAAGGAACCAUCUUUACAGUACAGUGUUCUAGAAGU GCUGCACGUUGUUGGCCCGAUCCAAUGGACAUAUGUCCGCG UGGGUUCGAACCCCACUCCUGGUACCA	62,063
htRNA^{Leu}/pre-miR-34a/miR-142-3p	194	ACCAGGAUGGCCGAGUGGUUAAGGCGUUGGACUGGCCAGCU GUGAGUGUUUCUUUGUAGUGUUUCCUACUUUAUGGAUGUGA GCAAUAGUAAGGAAUCCAUAAAGUGGACAGCACUACUCAGAA GUGCUGCACGUUGUUGGCCCGAUCCAAUGGACAUAUGUCCG CGUGGGUUCGAACCCCACUCCUGGUACCA	62,674
htRNA^{Leu}/pre-miR-34a/miR-194-3p	192	ACCAGGAUGGCCGAGUGGUUAAGGCGUUGGACUGGCCAGCU GUGAGUGUUUCUUUGUAACAGCAACUCCAUGUGGAUGUGAG CAAUAGUAAGGAAUCCACGUGGGUUAGCUGUUACUUAGAAGU GCUGCACGUUGUUGGCCCGAUCCAAUGGACAUAUGUCCGCG UGGGUUCGAACCCCACUCCUGGUACCA	62,094
htRNA^{Leu}/pre-miR-34a/miR-205-5p	192	ACCAGGAUGGCCGAGUGGUUAAGGCGUUGGACUGGCCAGCU GUGAGUGUUUCUUUCCUUCAUUCCACCGGAGUCUGUGUGAG CAAUAGUAAGGAACAGACUCCGUGGUAAUGAAGGCUAGAAGU GCUGCACGUUGUUGGCCCGAUCCAAUGGACAUAUGUCCGCG UGGGUUCGAACCCCACUCCUGGUACCA	62,068
htRNA^{Ser}/pre-miR-34a			
htRNA^{Ser}/sephadex-aptamer	118	GCAGCGAUGGCCGAGUGGUUAAGGCGUUGGACUAGUAAUUU ACGUCGACGGUGACGUCGAUGGUUGCGGAAUCCAAUGGGGU CUCCCCGCGCAGGUUCGAACCCUGCUCGCUGCGCCA	38,302
htRNA^{Ser}/pre-miR-34a/BCL2-siRNA	191	GCAGCGAUGGCCGAGUGGUUAAGGCGUUGGACUGGCCAGCU GUGAGUGUUUCUUUACAGUUCCACAAAGGCAUCCUUGUGAGC AAUAGUAAGGAAGGGAUGCCUUGUGGGAACUGUCUAGAAGU GCUGCACGUUGUUGGCCCAAUCCAAUGGGGUCUCCCCGCGC AGGUUCGAACCCUGCUCGCUGCGCCA	61,809
htRNA^{Ser}/pre-miR-34a/AGR2-siRNA	191	GCAGCGAUGGCCGAGUGGUUAAGGCGUUGGACUGGCCAGCU GUGAGUGUUUCUUUUAAAGCUUGACUGUGUGGGCUUGUGAG CAAUAGUAAGGAAGGCCCACACGUCUAAGCUUUACUAGAAGU GCUGCACGUUGUUGGCCCAAUCCAAUGGGGUCUCCCCGCGC AGGUUCGAACCCUGCUCGCUGCGCCA	61,747
htRNA^{Ser}/pre-miR-34a/miR-124-3p	191	GCAGCGAUGGCCGAGUGGUUAAGGCGUUGGACUGGCCAGCU GUGAGUGUUUCUUUAAGGCACGCGGUGAAUGCCGUUGUGAG CAAUAGUAAGGAAGCGGUGUUCCCGUCGUGCCUUCUAGAAG UGCUGCACGUUGUUGGCCCAAUCCAAUGGGGUCUCCCCGCG CAGGUUCGAACCCUGCUCGCUGCGCCA	61,809
htRNA^{Ser}/pre-miR-34a/let-7c-5p	192	GCAGCGAUGGCCGAGUGGUUAAGGCGUUGGACUGGCCAGCU GUGAGUGUUUCUUUGAGGUAGUAGGUUGUAUGGUUUGUGAG CAAUAGUAAGGAAGAACUGUACACCUUACUACCUUUCAGAAG UGCUGCACGUUGUUGGCCCAAUCCAAUGGGGUCUCCCCGCG CAGGUUCGAACCCUGCUCGCUGCGCCA	62,079
htRNA^{Ser}/pre-miR-34a/miR-328-3p	191	GCAGCGAUGGCCGAGUGGUUAAGGCGUUGGACUGGCCAGCU GUGAGUGUUUCUUCUGGCCCUCUCUGCCCUUCCGUUGUGAG CAAUAGUAAGGAAGCGGGGGGGGAGAUGGGGGCCAUUAGAAG UGCUGCACGUUGUUGGCCCAAUCCAAUGGGGUCUCCCCGCG CAGGUUCGAACCCUGCUCGCUGCGCCA	61,879
htRNA^{Ser}/pre-miR-34a/miR-200b-3p	191	GCAGCGAUGGCCGAGUGGUUAAGGCGUUGGACUGGCCAGCU GUGAGUGUUUCUUUAAUACUGCCUGGUAAUGAUGAUGUGAG CAAUAGUAAGGAAUCAUCAUUAUAGUGCAGUAUUCUAGAAGU GCUGCACGUUGUUGGCCCAAUCCAAUGGGGUCUCCCCGCGC AGGUUCGAACCCUGCUCGCUGCGCCA	61,726
htRNA^{Ser}/pre-miR-34a/miR-22-3p	191	GCAGCGAUGGCCGAGUGGUUAAGGCGUUGGACUGGCCAGCU GUGAGUGUUUCUUAAGCUGCCAGUUGAAGAACUGUUGUGAG CAAUAGUAAGGAAGCAGUUCUUAGCUUGGCAGCUCUAGAAGU GCUGCACGUUGUUGGCCCAAUCCAAUGGGGUCUCCCCGCGC AGGUUCGAACCCUGCUCGCUGCGCCA	61,810
htRNA^{Ser}/pre-miR-34a/miR-148-3p	191	GCAGCGAUGGCCGAGUGGUUAAGGCGUUGGACUGGCCAGCU GUGAGUGUUUCUUUCAGUGCACUACAGAACUUUGUUGUGAG	61,755

htRNA^{Ser}/pre-miR-34a/miR-6775-3p	191	CAAUAGUAAGGAAGCAAAGUUCGUAUGUGCACUGCUAGAAGU GCUGCACGUUGUUGGCCCAAUCCAAUGGGGUCUCCCCGCGC AGGUUCGAACCCUGCUCGCUGCGCCA GCAGCGAUGGCCGAGUGGUUAAGGCGUUGGACUGGCCAGCU GUGAGUGUUUCUUAGGCCCUGUCCUCUGCCCCAGUUGUGAG CAAUAGUAAGGAAGCUGGGGCAAGGCGCAGGGCCCUAGAAG UGCUGCACGUUGUUGGCCCAAUCCAAUGGGGUCUCCCCGCG CAGGUUCGAACCCUGCUCGCUGCGCCA GCAGCGAUGGCCGAGUGGUUAAGGCGUUGGACUGGCCAGCU GUGAGUGUUUCUUUAAUUGUCAACUACUGUCAGUUUGUGAG CAAUAGUAAGGAAAACUGACAGAGUAUGACAAUUCUAGAAGU GCUGCACGUUGUUGGCCCAAUCCAAUGGGGUCUCCCCGCGC AGGUUCGAACCCUGCUCGCUGCGCCA	61,844
htRNA^{Ser}/pre-miR-34a/NRF2-siRNA	191		61,732

Table S2. Primers used for the construction of RNA expression plasmids.

Target ncRNA	Cloning Primers (5' to 3')	
htRNA/pre-miR-34a		
htRNA^{Lys}/pre-miR-34a	F	TTGTAACGCTGAATTCGCCTGGATAGCTCAGTTGGTAGAGCATCAGACTGGCCAGCTGTGAGTG
	R	CTTTCGCTAAGGATCTGCAGTGGGCGCCTGAACAGGGACTTGAACCCTGGACCCTCAGATTGGGCCAACAACGTGC
htRNA^{Gln}/pre-miR-34a	F	TTGTAACGCTGAATTCGGTCCCATGGTGTAATGGTTAGCACTCTGGACTGGCCAGCTGTGAGTG
	R	CTTTCGCTAAGGATCTGCAGTGGAGGTCCCACCGAGATTTGAACTCGGATCGCTGGATTGGGCCAACAACGTGC
htRNA^{Cys}/pre-miR-34a	F	TTGTAACGCTGAATTCGGGGGCATAGCTCAGTGGTAGAGCATTTGACTGGCCAGCTGTGAGTG
	R	CTTTCGCTAAGGATCTGCAGTGGAGGGGGCACCTGGATTTGAACCAGGGACCTCTTGATCGGGCCAACAACGTGC
htRNA^{Tyr}/pre-miR-34a	F	TTGTAACGCTGAATTCCCTTCGATAGCTCAGTTGGTAGAGCGGAGGACTGGCCAGCTGTGAGTG
	R	CTTTCGCTAAGGATCTGCAGTGGTCCTTCGAGCCGGATTCGAACCAGCGACCTAAGGATCGGGCCAACAACGTGC
htRNA^{Ser}/pre-miR-34a	F	TTGTAACGCTGAATTCGCAGCGATGGCCGAGTGGTTAAGGCGTTGGACTGGCCAGCTGTGAGTG
	R	CTTTCGCTAAGGATCTGCAGTGGCGCAGCGAGCAGGGTTCGAACCTGCGCGGGGAGACCCCATTGGATTGGGCCAACAACGTGC
htRNA^{Leu}/pre-miR-34a	F	TTGTAACGCTGAATTCACCAGGATGGCCGAGTGGTTAAGGCGTTGGACTGGCCAGCTGTGAGTG
	R	CTTTCGCTAAGGATCTGCAGTGGTACCAGGAGTGGGGTTCGAACCCACGCGGACATATGTCCATTGGATCGGGCCAACAACGTGC
htRNA^{Leu}/pre-miR-34a		
htRNA^{Leu}/sephadex-aptamer	F	TTGTAACGCTGAATTCACCAGGATGGCCGAGTGGTTAAGGCGTTGGACTAGTAATTTACGTCGACGGTGACGTCGATGGTTGCG
	R	CTTTCGCTAAGGATCTGCAGTGGTACCAGGAGTGGGGTTCGAACCCACGCGGACATATGTCCATTGGATCCCGCAACCATCGACGTCAC
htRNA^{Leu}/pre-miR-34a/miR-200b-3p	F	TTGTAACGCTGAATTCACCAGGATGGCCGAGTGGTTAAGGCGTTGGACTGGCCAGCTGTGAGTGTTTCTTTAATACTGCCTGGTAATGATGATGTGAGCAATAGTAAGGAATCATCA
	R	CTTTCGCTAAGGATCTGCAGTGGTACCAGGAGTGGGGTTCGAACCCACGCGGACATATGTCCATTGGATCGGGCCAACAACGTGCAGCACTTCTAGAATACTGCACTATAATGATGATTCCTTACT
htRNA^{Leu}/pre-miR-34a/miR-148-3p	F	TTGTAACGCTGAATTCACCAGGATGGCCGAGTGGTTAAGGCGTTGGACTGGCCAGCTGTGAGTGTTTCTTTCAGTGCACTACAGAACTTTGTTGTGAGCAATAGTAAGGAAGCAAAGTTC
	R	CTTTCGCTAAGGATCTGCAGTGGTACCAGGAGTGGGGTTCGAACCCACGCGGACATATGTCCATTGGATCGGGCCAACAACGTGCAGCACTTCTAGCAGTGCACATACGAACTTTGCTTCCTT
htRNA^{Leu}/pre-miR-34a/miR-22-3p	F	TTGTAACGCTGAATTCACCAGGATGGCCGAGTGGTTAAGGCGTTGGACTGGCCAGCTGTGAGTGTTTCTTAAGCTGCCAGTTGAAGAACTGTTGTGAGCAATAGTAAGGAAGTAGTTCTT
	R	CTTTCGCTAAGGATCTGCAGTGGTACCAGGAGTGGGGTTCGAACCCACGCGGACATATGTCCATTGGATCGGGCCAACAACGTGCAGCACTTCTAGAGCTGCCAAGCTAAGAACTACTTCCTTAC
htRNA^{Leu}/pre-miR-34a/miR-6775-3p	F	TTGTAACGCTGAATTCACCAGGATGGCCGAGTGGTTAAGGCGTTGGACTGGCCAGCTGTGAGTGTTTCTTAGGCCCTGTCCTCTGCCCCAGTTGTGAGCAATAGTAAGGAAGCTGGGGC
	R	CTTTCGCTAAGGATCTGCAGTGGTACCAGGAGTGGGGTTCGAACCCACGCGGACATATGTCCATTGGATCGGGCCAACAACGTGCAGCACTTCTAGGGCCCTGCGCCTTGCCCCAGCTTCCTTA
htRNA^{Leu}/pre-miR-34a/miR-133a-3p	F	TTGTAACGCTGAATTCACCAGGATGGCCGAGTGGTTAAGGCGTTGGACTGGCCAGCTGTGAGTGTTTCTTTTTGGTCCCCTTCAACCAGCTGTGTGAGCAATAG

	R	CTTTCGCTAAGGATCTGCAGTGGTACCAGGAGTGGGGTTCGAACCCACGCGG ACATATGTCCATTGGATCGGGCCAACAACGTGCAGCACTTCTAGTTGGTCCCA CTTAACCAGCTGCTTCCTTACTAT
htRNA^{Leu}/pre-miR-34a/miR-124-3p	F	uses the same primer as in htRNA^{Leu}/pre-miR-34a plus corresponding btRNA/hsa-miR-34a plasmid as template
	R	uses the same primer as in htRNA^{Leu}/pre-miR-34a plus corresponding btRNA/hsa-miR-34a plasmid as template
htRNA^{Leu}/pre-miR-34a/let-7c-5p	F	uses the same primer as in htRNA^{Leu}/pre-miR-34a plus corresponding btRNA/hsa-miR-34a plasmid as template
	R	uses the same primer as in htRNA^{Leu}/pre-miR-34a plus corresponding btRNA/hsa-miR-34a plasmid as template
htRNA^{Leu}/pre-miR-34a/NRF2-siRNA	F	uses the same primer as in htRNA^{Leu}/pre-miR-34a plus corresponding btRNA/hsa-miR-34a plasmid as template
	R	uses the same primer as in htRNA^{Leu}/pre-miR-34a plus corresponding btRNA/hsa-miR-34a plasmid as template
htRNA^{Leu}/pre-miR-34a/miR-122-5p	F	uses the same primer as in htRNA^{Leu}/pre-miR-34a plus corresponding btRNA/hsa-miR-34a plasmid as template
	R	uses the same primer as in htRNA^{Leu}/pre-miR-34a plus corresponding btRNA/hsa-miR-34a plasmid as template
htRNA^{Leu}/pre-miR-34a/miR-328-3p	F	uses the same primer as in htRNA^{Leu}/pre-miR-34a plus corresponding btRNA/hsa-miR-34a plasmid as template
	R	uses the same primer as in htRNA^{Leu}/pre-miR-34a plus corresponding btRNA/hsa-miR-34a plasmid as template
htRNA^{Leu}/pre-miR-34a/miR-7-1-5p	F	TTGTAACGCTGAATTCACCAGGATGGCCGAGTGGTTAAGGCGTTGGACTGGCC AGCTGTGAGTGTTTCTTTGGAAGACTAGTGATTTTGTTGTGTGAGCAATAGTAA GGAACAACAAAAT
	R	CTTTCGCTAAGGATCTGCAGTGGTACCAGGAGTGGGGTTCGAACCCACGCGG ACATATGTCCATTGGATCGGGCCAACAACGTGCAGCACTTCTAGGGAAGACTG AGTATTTTGTTGTTCCTTA
htRNA^{Leu}/pre-miR-34a/miR-92a-3p	F	TTGTAACGCTGAATTCACCAGGATGGCCGAGTGGTTAAGGCGTTGGACTGGCC AGCTGTGAGTGTTTCTTTATTGCACTTGTCCCGGCCTGTTGTGAGCAATAGTAA GGAAACAGGCCGG
	R	CTTTCGCTAAGGATCTGCAGTGGTACCAGGAGTGGGGTTCGAACCCACGCGG ACATATGTCCATTGGATCGGGCCAACAACGTGCAGCACTTCTAGATTGCACTAT GTCCGGCCTGTTTCCTT
htRNA^{Leu}/pre-miR-34a/miR-126-3p	F	TTGTAACGCTGAATTCACCAGGATGGCCGAGTGGTTAAGGCGTTGGACTGGCC AGCTGTGAGTGTTTCTTTCGTACCGTGAGTAATAATGCGTGTGAGCAATAGTAA GGAATGCATTATT
	R	CTTTCGCTAAGGATCTGCAGTGGTACCAGGAGTGGGGTTCGAACCCACGCGG ACATATGTCCATTGGATCGGGCCAACAACGTGCAGCACTTCTAGCGTACCATA GAGAATAATGCATTCCTT
htRNA^{Leu}/pre-miR-34a/miR-132-3p	F	TTGTAACGCTGAATTCACCAGGATGGCCGAGTGGTTAAGGCGTTGGACTGGCC AGCTGTGAGTGTTTCTTTAACAGTCTACAGCCATGGTCGTGTGAGCAATAGTAA GGAACGACCGTGG
	R	CTTTCGCTAAGGATCTGCAGTGGTACCAGGAGTGGGGTTCGAACCCACGCGG ACATATGTCCATTGGATCGGGCCAACAACGTGCAGCACTTCTAGAACAATCTG ACACCACGGTCGTTCCTT
htRNA^{Leu}/pre-miR-34a/miR-137-3p	F	TTGTAACGCTGAATTCACCAGGATGGCCGAGTGGTTAAGGCGTTGGACTGGCC AGCTGTGAGTGTTTCTTTTATTGCTTAAGAATACGCGTAGGTGAGCAATAGTAA GGACTACGCGTA
	R	CTTTCGCTAAGGATCTGCAGTGGTACCAGGAGTGGGGTTCGAACCCACGCGG ACATATGTCCATTGGATCGGGCCAACAACGTGCAGCACTTCTAGTACCACCCG AAGATACGCGTAGTCCTTACT
htRNA^{Leu}/pre-miR-34a/miR-140-5p	F	TTGTAACGCTGAATTCACCAGGATGGCCGAGTGGTTAAGGCGTTGGACTGGCC AGCTGTGAGTGTTTCTTCAGTGGTTTTACCCTATGGTAGTGTGAGCAATAGTAA GGAACTACCATA
	R	CTTTCGCTAAGGATCTGCAGTGGTACCAGGAGTGGGGTTCGAACCCACGCGG ACATATGTCCATTGGATCGGGCCAACAACGTGCAGCACTTCTAGAGTGGTTCG TACCTATGGTAGTTCCTT
htRNA^{Leu}/pre-miR-34a/miR-141-3p	F	TTGTAACGCTGAATTCACCAGGATGGCCGAGTGGTTAAGGCGTTGGACTGGCC AGCTGTGAGTGTTTCTTTAACACTGTCTGGTAAAGATGGTGTGAGCAATAGTAA GGAACCATCTTTA

	R	CTTTCGCTAAGGATCTGCAGTGGTACCAGGAGTGGGGTTCGAACCCACGCGG ACATATGTCCATTGGATCGGGCCAACAACGTGCAGCACTTCTAGAACACTGTA CTGTAAAGATGGTTCCTT
htRNA^{Leu}/pre-miR-34a/miR-142-3p	F	TTGTAACGCTGAATTCACCAGGATGGCCGAGTGGTTAAGGCGTTGGACTGGCC AGCTGTGAGTGTTTCTTTGTAGTGTTTCCTACTTTATGGATGTGAGCAATAGTAA GGAATCCATAAAG
	R	CTTTCGCTAAGGATCTGCAGTGGTACCAGGAGTGGGGTTCGAACCCACGCGG ACATATGTCCATTGGATCGGGCCAACAACGTGCAGCACTTCTGAGTAGTGCTG TCCACTTTATGGATTCCTT
htRNA^{Leu}/pre-miR-34a/miR-194-3p	F	TTGTAACGCTGAATTCACCAGGATGGCCGAGTGGTTAAGGCGTTGGACTGGCC AGCTGTGAGTGTTTCTTTGTAACAGCAACTCCATGTGGATGTGAGCAATAGTAA GGAATCCACGTG
	R	CTTTCGCTAAGGATCTGCAGTGGTACCAGGAGTGGGGTTCGAACCCACGCGG ACATATGTCCATTGGATCGGGCCAACAACGTGCAGCACTTCTAAGTAACAGCT AACCCACGTGGATTCCTTA
htRNA^{Leu}/pre-miR-34a/miR-205-5p	F	TTGTAACGCTGAATTCACCAGGATGGCCGAGTGGTTAAGGCGTTGGACTGGCC AGCTGTGAGTGTTTCTTTCCTTCATTCCACCGGAGTCTGTGTGAGCAATAGTAA GGAACAGACTCCG
	R	CTTTCGCTAAGGATCTGCAGTGGTACCAGGAGTGGGGTTCGAACCCACGCGG ACATATGTCCATTGGATCGGGCCAACAACGTGCAGCACTTCTAGCCTTCATTAC CACGGAGTCTGTTCCTT
htRNA^{Ser}/pre-miR-34a		
htRNA^{Ser}/sephadex-aptamer	F	TTGTAACGCTGAATTCGCAGCGATGGCCGAGTGGTTAAGGCGTTGGACTAGTA ATTTACGTCGACGGTGACGTCGATGGTTG
	R	CTTTCGCTAAGGATCTGCAGTGGCGCAGCGAGCAGGGTTCGAACCTGCGCGG GGAGACCCCATTGGATTCCGCAACCATCGACGTC
htRNA^{Ser}/pre-miR-34a/BCL2-siRNA	F	TTGTAACGCTGAATTCGCAGCGATGGCCGAGTGGTTAAGGCGTTGGACTGGC CAGCTGTGAGTGTTTCTTTACAGTTCCACAAAGGCATCCTTGTGAGCAATAGTA AGGAAGGGATGCCTTG
	R	CTTTCGCTAAGGATCTGCAGTGGCGCAGCGAGCAGGGTTCGAACCTGCGCGG GGAGACCCCATTGGATTGGGCCAACAACGTGCAGCACTTCTAGACAGTTCCCA CAAGGCATCCCTTCC
htRNA^{Ser}/pre-miR-34a/AGR2-siRNA	F	TTGTAACGCTGAATTCGCAGCGATGGCCGAGTGGTTAAGGCGTTGGACTGGC CAGCTGTGAGTGTTTCTTTTAAAGCTTGACTGTGTGGGCTTGTGAGCAATAGTA AGGAAGGCCCACACGT
	R	CTTTCGCTAAGGATCTGCAGTGGCGCAGCGAGCAGGGTTCGAACCTGCGCGG GGAGACCCCATTGGATTGGGCCAACAACGTGCAGCACTTCTAGTAAAGCTTAG ACGTGTGGGCCTTCC
htRNA^{Ser}/pre-miR-34a/miR-124-3p	F	uses the same primer as in htRNA^{Ser}/pre-miR-34a plus corresponding btRNA/hsa-miR-34a plasmid as template
	R	uses the same primer as in htRNA^{Ser}/pre-miR-34a plus corresponding btRNA/hsa-miR-34a plasmid as template
htRNA^{Ser}/pre-miR-34a/let-7c-5p	F	uses the same primer as in htRNA^{Ser}/pre-miR-34a plus corresponding btRNA/hsa-miR-34a plasmid as template
	R	uses the same primer as in htRNA^{Ser}/pre-miR-34a plus corresponding btRNA/hsa-miR-34a plasmid as template
htRNA^{Ser}/pre-miR-34a/miR-328-3p	F	uses the same primer as in htRNA^{Ser}/pre-miR-34a plus corresponding btRNA/hsa-miR-34a plasmid as template
	R	uses the same primer as in htRNA^{Ser}/pre-miR-34a plus corresponding btRNA/hsa-miR-34a plasmid as template
htRNA^{Ser}/pre-miR-34a/miR-200b-3p	F	uses the same primer as in htRNA^{Ser}/pre-miR-34a plus corresponding btRNA/hsa-miR-34a plasmid as template
	R	uses the same primer as in htRNA^{Ser}/pre-miR-34a plus corresponding btRNA/hsa-miR-34a plasmid as template
htRNA^{Ser}/pre-miR-34a/miR-22-3p	F	uses the same primer as in htRNA^{Ser}/pre-miR-34a plus corresponding btRNA/hsa-miR-34a plasmid as template
	R	uses the same primer as in htRNA^{Ser}/pre-miR-34a plus corresponding btRNA/hsa-miR-34a plasmid as template
htRNA^{Ser}/pre-miR-34a/miR-148-3p	F	uses the same primer as in htRNA^{Ser}/pre-miR-34a plus corresponding btRNA/hsa-miR-34a plasmid as template
	R	uses the same primer as in htRNA^{Ser}/pre-miR-34a plus corresponding btRNA/hsa-miR-34a plasmid as template

htRNA^{Ser}/pre-miR-34a/miR-6775-3p	F	uses the same primer as in htRNA^{Ser}/pre-miR-34a plus corresponding btRNA/hsa-miR-34a plasmid as template
	R	uses the same primer as in htRNA^{Ser}/pre-miR-34a plus corresponding btRNA/hsa-miR-34a plasmid as template
htRNA^{Ser}/pre-miR-34a/NRF2-siRNA	F	uses the same primer as in htRNA^{Ser}/pre-miR-34a plus corresponding btRNA/hsa-miR-34a plasmid as template
	R	uses the same primer as in htRNA^{Ser}/pre-miR-34a plus corresponding btRNA/hsa-miR-34a plasmid as template

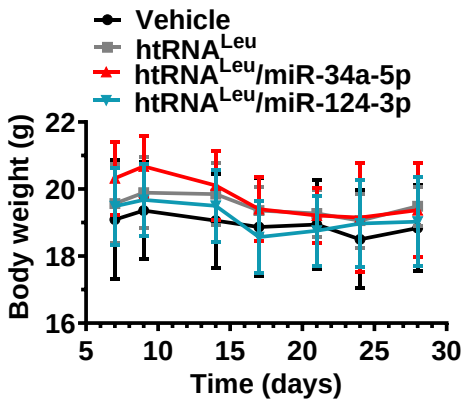

Figure S1. Animal body weights did not differ between different treatment groups (not significant between any groups; 2-way ANOVA with Bonferroni post-tests).