

TargetScan miRNA pre			
CircRNA	CircRNA (Top) - miRNA (Bottom) pairing	Site Type	CircRN A Start
Mirbase ID			
hsa_circ_0059354 (5' ... 3')	GCACAAUGUGCUGCUCGUGAGCAG 	7mer-m8	535
hsa-miR-1178 (3' ... 5')	GAUCCCUUCUUGUCACUCGUU		
hsa_circ_0059354 (5' ... 3')	AAAUGUCGAGGCUACCUGCAGAU 	7mer-1a	1148
hsa-miR-1184 (3' ... 5')	CCUUCGGUAGUUUCAGCGACGUCC		
hsa_circ_0059354 (5' ... 3')	UGGUCUUAACGUAGACUGCAGAA 	7mer-1a	1841
hsa-miR-1184 (3' ... 5')	CCUUCGGUAGUUUCAGCGACGUCC		
hsa_circ_0059354 (5' ... 3')	CCUUUGGAGUCUUCGCCUGCAGAU 	7mer-1a	4123
hsa-miR-1184 (3' ... 5')	CCUUCGGUAGUUUCAGCGACGUCC		

<u>hsa_circ_0059354 (5' ... 3')</u>	GCCCUGGGACUCCUAUCAGGAAG 	7mer-1a	1487
<u>hsa-miR-1200 (3' ... 5')</u>	CUCCGAGUCUUACCGAGUCCUC		
<u>hsa_circ_0059354 (5' ... 3')</u>	GCGCAAGUACACCGUGCUCCGGC 	7mer-m8	108
<u>hsa-miR-1203 (3' ... 5')</u>	CUCGACGUAGGACCGAGGCC		
<u>hsa_circ_0059354 (5' ... 3')</u>	ACACAAACCUCCCCAGCUCCGGC 	7mer-m8	279
<u>hsa-miR-1203 (3' ... 5')</u>	CUCGACGUAGGACCGAGGCC		
<u>hsa_circ_0059354 (5' ... 3')</u>	GAAAUGUCGAGGCUACCUGCAGA 	8mer-1a	1147
<u>hsa-miR-1205 (3' ... 5')</u>	GAGUUUCGUUUGGGACGUU		
<u>hsa_circ_0059354 (5' ... 3')</u>	UGGUCUUAACGUAGACUGCAGAA 	7mer-1a	1841
<u>hsa-miR-1205 (3' ... 5')</u>	GAGUUUCGUUUGGGACGUU		

<u>hsa_circ_0059354 (5' ... 3')</u>	ACCUUUGGAGUCUUCCCUGCAGA 	8mer-1a	4122
<u>hsa-miR-1205 (3' ... 5')</u>	GAGUUUCGUUUGGGACGUU 		
<u>hsa_circ_0059354 (5' ... 3')</u>	AAAGAGAAAUUUCUACAUGAAC 	8mer-1a	3773
<u>hsa-miR-1206 (3' ... 5')</u>	CGAAUUUGUAGAUGUACUUG 		
<u>hsa_circ_0059354 (5' ... 3')</u>	AGGCUGGAGUGCAGUGGUGGGAU 	7mer-1a	3513
<u>hsa-miR-1224-3p (3' ... 5')</u>	GACUCCUCUCUCCUCCACCCC 	7mer-m8	3644
<u>hsa_circ_0059354 (5' ... 3')</u>	GUGUGGUUUUAGUAGAGGUGGG 		
<u>hsa-miR-1224-3p (3' ... 5')</u>	GACUCCUCUCUCCUCCACCCC 		
<u>hsa_circ_0059354 (5' ... 3')</u>	AGAUGCACAAGCUGUGGUGGGAA 	7mer-1a	4088

<u>hsa-miR-1224-3p</u> (3' ... 5')	GACUCCUCUCUCCUCCACCCC		
<u>hsa circ 0059354</u> (5' ... 3')	CCUGUGUGUUUCUCUGUACCCAG 	7mer-m8	981
<u>hsa-miR-1225-5p</u> (3' ... 5')	GGGGGGUGACCCGGCAUGGGUG		
<u>hsa circ 0059354</u> (5' ... 3')	CAAGAGCCGUGAGCUUGGCACAU 	7mer-1a	518
<u>hsa-miR-1227</u> (3' ... 5')	GACCCCUUUUCCCACCGUGC		
<u>hsa circ 0059354</u> (5' ... 3')	UCUCUUCCUCACCAGAAGAGAA 	7mer-1a	3130
<u>hsa-miR-1236</u> (3' ... 5')	GACCUCUCUGUUCCCCUUCUCC		
<u>hsa circ 0059354</u> (5' ... 3')	UCUGUGUUUAGAGAG--GGAAGAGG 	7mer-m8	646
<u>hsa-miR-1236</u> (3' ... 5')	GACCUCUCUGUUCCCCUUCUCC		
<u>hsa circ 0059354</u> (5' ... 3')	CAGAGCUGGGCAGUU---GAGGAAAG		

		7mer-1a	1699
<u>hsa-miR-1238 (3' ... 5')</u>	CCCCGUCUGUCUGCUCCUUC		
<u>hsa circ 0059354 (5' ... 3')</u>	AAUUUCCACAAAGCAAACUACUA		8mer-1a
<u>hsa-miR-1244 (3' ... 5')</u>	UUGGUAGAGUAUGUUUGG-UUGAUGAA		
<u>hsa circ 0059354 (5' ... 3')</u>	AUGUCCAGUUGGCCA---GAUCACUU		7mer-m8
<u>hsa-miR-1245 (3' ... 5')</u>	UACAUCCGGAAACUAGUGAA		
<u>hsa circ 0059354 (5' ... 3')</u>	UCUCCCUGUAUGCCUAGAAGGAU		7mer-1a
<u>hsa-miR-1248 (3' ... 5')</u>	AAAUCGUGUCACGAAUAUGUUCUCCCA		714
<u>hsa circ 0059354 (5' ... 3')</u>	AUGAGAU AUGAUUUCUAGAGAU		7mer-1a
			3948

<u>hsa-miR-1251 (3' ... 5')</u>	UCGCGGAAACCGUCGAUCUCA		
<u>hsa circ 0059354 (5' ... 3')</u>	GAGGCACUGCCCAUCUCUUUCUC 	7mer-m8	1653
<u>hsa-miR-1253 (3' ... 5')</u>	ACGUCCGACUAGA--AGAAGAGA		
<u>hsa circ 0059354 (5' ... 3')</u>	CUGAGACAUGCUGAUGCUCUCAAG 	7mer-1a	3087
<u>hsa-miR-127-5p (3' ... 5')</u>	UAGUCUCGGGAGACUCGAAGUC		
<u>hsa circ 0059354 (5' ... 3')</u>	AUGCCGGUACUUAAAAGCUUCAU 	7mer-m8	40
<u>hsa-miR-127-5p (3' ... 5')</u>	UAGUCUCGGGAGACUCGAAGUC		
<u>hsa circ 0059354 (5' ... 3')</u>	GUGGGGUUCAGGGAAGCUCUUUA 	8mer-1a	1348
<u>hsa-miR-1276 (3' ... 5')</u>	ACAGAGGUGUCCCGAGAAAU		
<u>hsa circ 0059354 (5' ... 3')</u>	UAAGAAAAGGGAAUUCUCUUUA		

			7mer-1a	3340
<u>hsa-miR-1276 (3' ... 5')</u>	ACAGAGGUGUCCCGAGAAAU			
<u>hsa circ 0059354 (5' ... 3')</u>	CUCACCAGAAGAGAACAGUACUC		7mer-m8	3138
<u>hsa-miR-1278 (3' ... 5')</u>	UAUCUACUAUACGUGUCAUGAU			
<u>hsa circ 0059354 (5' ... 3')</u>	AGGCUGGGAGUGCAGU-GGUGGGAU		7mer-1a	3513
<u>hsa-miR-1280 (3' ... 5')</u>	CCCACCGUCGCCACCCU			
<u>hsa circ 0059354 (5' ... 3')</u>	AGAUGCACAAGCUGUGGUGGGAA		7mer-1a	4088
<u>hsa-miR-1280 (3' ... 5')</u>	CCCACCGUCGCCACCCU			
<u>hsa circ 0059354 (5' ... 3')</u>	UGUCAUCAAAGGUUUCCUGCAC		7mer-1a	1203
<u>hsa-miR-1286 (3' ... 5')</u>	UCCCGAGUAGAACCC---AGGACGU			

<u>hsa_circ_0059354 (5' ... 3')</u>	ACACUUUUCCAUUUU-GUCCUGCC 	7mer-m8	2449
<u>hsa-miR-1286 (3' ... 5')</u>	UCCCGAGUAGAACCAACCAGGACGU		
<u>hsa_circ_0059354 (5' ... 3')</u>	ACAGUCUGUGCCCUGGGACUCCU 	7mer-m8	1478
<u>hsa-miR-1289 (3' ... 5')</u>	UUUUACGCUAAGGACCUGAGGU		
<u>hsa_circ_0059354 (5' ... 3')</u>	ACCUAUGUGAUCUUAAAUCCAA 	7mer-1a	1431
<u>hsa-miR-1290 (3' ... 5')</u>	AGGGACUAGGUUUUUAGGU		
<u>hsa_circ_0059354 (5' ... 3')</u>	GGAGAUGCAUCCAAGAAUGAAG 	7mer-1a	1306
<u>hsa-miR-1298 (3' ... 5')</u>	AUGUAGACCUGUCGGCUUACUU		
<u>hsa_circ_0059354 (5' ... 3')</u>	GAGAUGUAAGAAAGAAUGAAU 	7mer-1a	3966

<u>hsa-miR-1298 (3' ... 5')</u>	AUGUAGACCUGUCGGCUUACUU		
<u>hsa_circ_0059354 (5' ... 3')</u>	UGUGGCGCCCCUUCUCCAGAU 	7mer-m8	3988
<u>hsa-miR-1299 (3' ... 5')</u>	AGGGAGUGUGUCUUAAGGCUU		
<u>hsa_circ_0059354 (5' ... 3')</u>	UUUGAAAUAAGCAGCAGUUGAAC 	7mer-m8	2530
<u>hsa-miR-1305 (3' ... 5')</u>	AGAGAGGGUAUCUCAACUUUU		
<u>hsa_circ_0059354 (5' ... 3')</u>	AGGCUGGAGGAUAGCCGAGAC 	7mer-1a	145
<u>hsa-miR-1307 (3' ... 5')</u>	GUGCUGGCUGCGGUGCGGCUA		
<u>hsa_circ_0059354 (5' ... 3')</u>	GUGUCACAGAUACAUCGCCGAGA 	8mer-1a	3435
<u>hsa-miR-1307 (3' ... 5')</u>	GUGCUGGCUGCGGUGCGGCUA		
<u>hsa_circ_0059354 (5' ... 3')</u>	GGAGCAGCCACACGUCUGUCUGU		

			7mer-m8	628
<u>hsa-miR-1324 (3' ... 5')</u>	CUUUCACGUACUUAAAGACAGACC			
<u>hsa circ 0059354 (5' ... 3')</u>	CCUGGGUGGCCUGGCUAUGGAGAU		7mer-1a	1573
<u>hsa-miR-136 (3' ... 5')</u>	AGGUAGUAGUUUUGUUUACCUA			
<u>hsa circ 0059354 (5' ... 3')</u>	UGAGAAGGCUCACAGCUGUGGUC		7mer-m8	1823
<u>hsa-miR-140-3p (3' ... 5')</u>	GGCACCAAGAUGGGACACCAU			
<u>hsa circ 0059354 (5' ... 3')</u>	CACAAGAUGCACAAGCUGUGGUG		7mer-m8	4084
<u>hsa-miR-140-3p (3' ... 5')</u>	GGCACCAAGAUGGGACACCAU			
<u>hsa circ 0059354 (5' ... 3')</u>	CCCACGUUUUUACACUGGAAA		7mer-1a	844
<u>hsa-miR-145 (3' ... 5')</u>	UCCCUAAGGACCCUUUUGACCUG			
<u>hsa circ 0059354 (5' ... 3')</u>	AUCUAACAUAAUCUGACAGGGCC			

			7mer-m8	4319
<u>hsa-miR-146b-3p (3' ... 5')</u>	GGUCUUGACUCAGGUGUCCGU			
<u>hsa circ 0059354 (5' ... 3')</u>	GCCCACGUAUUUUACACUGGAA		7mer-1a	843
<u>hsa-miR-1825 (3' ... 5')</u>	CCUCUCCUCCCGUGACCU			
<u>hsa circ 0059354 (5' ... 3')</u>	UUUGCAGUCAAGACC-AUUCUUC		7mer-m8	1243
<u>hsa-miR-186 (3' ... 5')</u>	UCGGGUUUUCCUCUUAAGAAC			
<u>hsa circ 0059354 (5' ... 3')</u>	ACUCUUCGACCGAUAU-UGUGGGAG		7mer-m8	2618
<u>hsa-miR-188-3p (3' ... 5')</u>	ACGUUUGGGACGUACACCCUC			
<u>hsa circ 0059354 (5' ... 3')</u>	GAUGCACAAGCUGUGGUGGGAAA		7mer-1a	4089
<u>hsa-miR-188-3p (3' ... 5')</u>	ACGUUUGGGACGUACACCCUC			
<u>hsa circ 0059354 (5' ... 3')</u>	GGGAGAGGCUUCCUUUGUUACAG			

			7mer-1a	2023
<u>hsa-miR-194 (3' ... 5')</u>	AGGUGUACCUAACGACAAUGU			
<u>hsa circ 0059354 (5' ... 3')</u>	CCCGGGAGGGGCUUAUGUUACAA		7mer-1a	2766
<u>hsa-miR-194 (3' ... 5')</u>	AGGUGUACCUAACG---ACAAUGU			
<u>hsa circ 0059354 (5' ... 3')</u>	GCUCUUUAGGCCACCUGGUGAAG		7mer-1a	1363
<u>hsa-miR-197 (3' ... 5')</u>	CGACCCACCUCUUCCACCACUU			
<u>hsa circ 0059354 (5' ... 3')</u>	CUUCCCUGUACGUAUUGGUGAAG		7mer-1a	2948
<u>hsa-miR-197 (3' ... 5')</u>	CGACCCACCUCUUCCACCACUU			
<u>hsa circ 0059354 (5' ... 3')</u>	AACCACUAGCUCUUACUGGACAG		7mer-1a	2218
<u>hsa-miR-198 (3' ... 5')</u>	CUUUGGAUAGAGGGAGACCUGG			
<u>hsa circ 0059354 (5' ... 3')</u>	UGAGAGGGAAGGUGA--UGACUUAA			

			7mer-1a	2871
<u>hsa-miR-224 (3' ... 5')</u>	UUGCCUUGGUGAUCACUGAAC			
<u>hsa circ 0059354 (5' ... 3')</u>	AUGUUUUAAUGCAUCUGACUUAG		7mer-1a	4379
<u>hsa-miR-224 (3' ... 5')</u>	UUGCCUUGGUGAUCACUGAAC			
<u>hsa circ 0059354 (5' ... 3')</u>	UCUUUGAUUUGCACUAGCACUAC		7mer-1a	2264
<u>hsa-miR-520f (3' ... 5')</u>	UUGGGAGAUUUUCCUUCGUGAA			
<u>hsa circ 0059354 (5' ... 3')</u>	GAUCUUACUGAAAUAAGCACUU		7mer-m8	4401
<u>hsa-miR-520f (3' ... 5')</u>	UUGGGAGAUUUUCCUUCGUGAA			
<u>hsa circ 0059354 (5' ... 3')</u>	UCCUGCCCCGAUUCAUACCUAU		7mer-m8	1793
<u>hsa-miR-331-5p (3' ... 5')</u>	CCUAGGGACCCUGGUUAUGGAUC			

<u>hsa_circ_0059354 (5' ... 3')</u>	CCAUUUUGUCCUGGCC-CUCUUGAG 	7mer-1a	2457
<u>hsa-miR-335 (3' ... 5')</u>	UGUAAAAAGCAAAUACGAGAACU		
<u>hsa_circ_0059354 (5' ... 3')</u>	AGGGAGCGAUACUAAGGCAGACU 	7mer-m8	2343
<u>hsa-miR-346 (3' ... 5')</u>	UCUCCGUCCGUACGCCCGUCUGU		
<u>hsa_circ_0059354 (5' ... 3')</u>	UGGAUGUAGAAGUCAGCAGACAG 	7mer-1a	327
<u>hsa-miR-346 (3' ... 5')</u>	UCUCCGUCCGUACGCCCGUCUGU		
<u>hsa_circ_0059354 (5' ... 3')</u>	CAUGUGCUGCUCGUGAGCAGGAA 	7mer-1a	538
<u>hsa-miR-370 (3' ... 5')</u>	UGGUCCAAGGUGGGGUCGUCCG		
<u>hsa_circ_0059354 (5' ... 3')</u>	UCACGUCCUAAGAACCUAUCAG 	7mer-1a	2490
<u>hsa-miR-383 (3' ... 5')</u>	UCGGUGUUAGUGGAAGACUAGA		

<u>hsa_circ_0059354 (5' ... 3')</u>	CUAUCACAAGGGGGGUGUUGAAG 	7mer-1a	4029
<u>hsa-miR-421 (3' ... 5')</u>	CGCGGGGUUAUUACAGACAACUA		
<u>hsa_circ_0059354 (5' ... 3')</u>	UGUGUGGAGAUGCAUCCAAGAA 	7mer-1a	1301
<u>hsa-miR-432 (3' ... 5')</u>	GGUGGGGUUACUGGAUGAGGUUCU		
<u>hsa_circ_0059354 (5' ... 3')</u>	GUGGAAGUGAGAGGAGAUCCAU 	7mer-m8	2394
<u>hsa-miR-450b-3p (3' ... 5')</u>	AUACCUACGUUUUACUAGGGUU		
<u>hsa_circ_0059354 (5' ... 3')</u>	GUGGAAGUGAGAGGAGAUCCAU 	7mer-m8	2394
<u>hsa-miR-769-3p (3' ... 5')</u>	UUGGUUCUGGGGCCUCUAGGGUC		
<u>hsa_circ_0059354 (5' ... 3')</u>	GCCCUGGGCACCCUCCUGCCCCC 	7mer-m8	1780

<u>hsa-miR-486-3p (3' ... 5')</u>	UAGGACAUGACUCGACGGGGC		
<u>hsa circ 0059354 (5' ... 3')</u>	CUUAUUUAACUUGCCUUUCAG 	7mer-m8	4236
<u>hsa-miR-488 (3' ... 5')</u>	CUGGUUCUUUAUCGGAAAGUU		
<u>hsa circ 0059354 (5' ... 3')</u>	CCUGUUUCCAGGCUGAUGUUUC 	7mer-m8	4152
<u>hsa-miR-494 (3' ... 5')</u>	CUCCAAAGGGCACA-UACAAAGU		
<u>hsa circ 0059354 (5' ... 3')</u>	CCGGGAGAGGCCUCCUUUGUUAC 	7mer-1a	2021
<u>hsa-miR-495 (3' ... 5')</u>	UUCUUCACGUGGUACAAACAAA		
<u>hsa circ 0059354 (5' ... 3')</u>	AAUAUCGUUUUCCAUCAUGCAAAAA 	7mer-1a	3227
<u>hsa-miR-507 (3' ... 5')</u>	AAGUGAGGUUUUCCACGUUUU		
<u>hsa circ 0059354 (5' ... 3')</u>	AAUAUCGUUUUCCAUCAUGCAAAAA		

			7mer-1a	3227
<u>hsa-miR-557 (3' ... 5')</u>	UCUGUUCCGGGUCCCCACGUUUG			
<u>hsa circ 0059354 (5' ... 3')</u>	UGAAUGCAAACACCUCCUGAGUU			
		7mer-m8	2065	
<u>hsa-miR-510 (3' ... 5')</u>	CACUAACGGUGAGAGGACUAU			
<u>hsa circ 0059354 (5' ... 3')</u>	CUAAGAACCUAUCAGAAAUUU			
		7mer-m8	2497	
<u>hsa-miR-513a-3p (3' ... 5')</u>	GGAAGAGUCUUUCCA---CUUUAAAU			
<u>hsa circ 0059354 (5' ... 3')</u>	UGCCCAGCCAAAGA-GAAAUUC			
		7mer-m8	3763	
<u>hsa-miR-513a-3p (3' ... 5')</u>	GGAAGAGUCUUUCCACUUUAAU			
<u>hsa circ 0059354 (5' ... 3')</u>	UGGGAAAGAACAGUU--CUGUGAAU			
		7mer-1a	2047	
<u>hsa-miR-513a-5p (3' ... 5')</u>	UACUGUGGAGGGACACUU			

<u>hsa_circ_0059354 (5' ... 3')</u>	UGUUCUAUGUGGAAACCUGUGAA 	8mer-1a	901
<u>hsa-miR-513a-5p (3' ... 5')</u>	UACUGUGGAGGGACACUU		
<u>hsa_circ_0059354 (5' ... 3')</u>	GCCUAGCUGGGGUAGAGGCACUG 	7mer-m8	1639
<u>hsa-miR-515-3p (3' ... 5')</u>	UUGCGAGGUUUUCUUCGUGAG		
<u>hsa_circ_0059354 (5' ... 3')</u>	GCCUAGCUGGGGUAGAGGCACUG 	7mer-m8	1639
<u>hsa-miR-519e (3' ... 5')</u>	UUGUGAGAUUUUCUCCGUGAA		
<u>hsa_circ_0059354 (5' ... 3')</u>	GACCCCCAGGAAGCUAGGCACUU 	7mer-m8	235
<u>hsa-miR-515-3p (3' ... 5')</u>	UUGCGAGGUUUUCU--UCCGUGAG		
<u>hsa_circ_0059354 (5' ... 3')</u>	GACCCCCAGGAAGCUAGGCACUU 	7mer-m8	235

<u>hsa-miR-519e (3' ... 5')</u>	UUGUGAGAUUUUCUCCGUGAA		
<u>hsa circ 0059354 (5' ... 3')</u>	AAUUGAGAAAUGAUUUGGAGAA 	8mer-1a	2092
<u>hsa-miR-515-5p (3' ... 5')</u>	GUCUUUCACGAAAGAAAACCUCUU		
<u>hsa circ 0059354 (5' ... 3')</u>	AAACACCUCCUGAGUUUUGCAAU 	7mer-1a	2072
<u>hsa-miR-518a-5p (3' ... 5')</u>	CUUUCCCGAAGGGAAACGUC		
<u>hsa circ 0059354 (5' ... 3')</u>	AAACACCUCCUGAGUUUUGCAAU 	7mer-1a	2072
<u>hsa-miR-527 (3' ... 5')</u>	CUUUCCCGAAGGGAAACGUC		
<u>hsa circ 0059354 (5' ... 3')</u>	CAGUUGAACAGAGACACUUUGC 	7mer-m8	2543
<u>hsa-miR-520g (3' ... 5')</u>	UGUGAGAUUUCCUUCGUGAAACA		
<u>hsa circ 0059354 (5' ... 3')</u>	CAGUUGAACAGAGACACUUUGC 	7mer-m8	2543

<u>hsa-miR-520h (3' ... 5')</u>	UGAGAUUUCCUUCGUGAAACA		
<u>hsa circ 0059354 (5' ... 3')</u>	ACAAAGAUCUCGCUGGUGCGUAC 	7mer-1a	1057
<u>hsa-miR-521 (3' ... 5')</u>	UGUGAGAUUUCGUUCACGCAA		
<u>hsa circ 0059354 (5' ... 3')</u>	AGUGGAAGGAA AUGUCUCAAGAA 	8mer-1a	1034
<u>hsa-miR-526b (3' ... 5')</u>	UGUCUUUCACGAAGGGAGUUCUC		
<u>hsa circ 0059354 (5' ... 3')</u>	UAAAUCCAACCCCAAUGGGAGAA 	7mer-1a	1445
<u>hsa-miR-532-3p (3' ... 5')</u>	ACGUUCGGAACCCACACCCUCC		
<u>hsa circ 0059354 (5' ... 3')</u>	UCUCCUUGGAGGACUUGGGAGAA 	7mer-1a	2172
<u>hsa-miR-532-3p (3' ... 5')</u>	ACGUUCGGAACCCAC---ACCCUCC		
<u>hsa circ 0059354 (5' ... 3')</u>	CUCUUCGACCGAUUUGUGGGAGU		

			7mer-m8	2619
<u>hsa-miR-532-3p (3' ... 5')</u>	ACGUUCGGAACCCACACCCUCC			
<u>hsa circ 0059354 (5' ... 3')</u>	CACCUUCUCUCCACAGAAUGUUU		7mer-m8	1675
<u>hsa-miR-543 (3' ... 5')</u>	UUCUUACGUGGCGCUUACAAA			
<u>hsa circ 0059354 (5' ... 3')</u>	GGUAUUUUUAUUUUGAAUGUUC		7mer-m8	2125
<u>hsa-miR-543 (3' ... 5')</u>	UUCUUACGUGGCGCUUACAAA			
<u>hsa circ 0059354 (5' ... 3')</u>	UCUUUCCAACCUCUGGGUUCUUG		7mer-m8	1260
<u>hsa-miR-548b-3p (3' ... 5')</u>	UGUUUUUCGUUGACU--CCAAGAAC			
<u>hsa circ 0059354 (5' ... 3')</u>	CAGAAAUUUUGGAAGGGUUCUUU		7mer-m8	2510
<u>hsa-miR-548b-3p (3' ... 5')</u>	UGUUUUUCGUUGACUCCAAGAAC			

<u>hsa_circ_0059354</u> (5' ... 3')	ACUUUCUCUUCUGGUAAUUUUUA 	7mer-1a	2114
<u>hsa-miR-548c-3p</u> (3' ... 5')	CGUUUUCAUUAACUCUAAAAAC		
<u>hsa_circ_0059354</u> (5' ... 3')	GCAAUAAGCCCACGUUUUUAC 	7mer-1a	836
<u>hsa-miR-548c-3p</u> (3' ... 5')	CGUUUUCAUUAACUCUAAAAAC		
<u>hsa_circ_0059354</u> (5' ... 3')	UAAAGGACAAAAGAC----CAGUUUA 	7mer-1a	2676
<u>hsa-miR-548g</u> (3' ... 5')	CAUGUUUUCAUUAUGUCAAAA		
<u>hsa_circ_0059354</u> (5' ... 3')	CCAACUUGUGAAAAGCAGUUUAG 	7mer-1a	2716
<u>hsa-miR-548g</u> (3' ... 5')	CAUGUUUUCAUUAUGUCAAAA		
<u>hsa_circ_0059354</u> (5' ... 3')	GUGGUGGGAAACCCUCAGUUUAC 	7mer-1a	4101

<u>hsa-miR-548g (3' ... 5')</u>	CAUGUUUCAUAAAUGUCAAAA		
<u>hsa circ 0059354 (5' ... 3')</u>	CC AUGUGCCUACCUAGAUACUUUC 	7mer-m8	466
<u>hsa-miR-548l (3' ... 5')</u>	CUGUUUUGGGCGUUUAUGAAAA		
<u>hsa circ 0059354 (5' ... 3')</u>	GGGAAACCCUCAGUUUACCUUUG 	7mer-m8	4106
<u>hsa-miR-548m (3' ... 5')</u>	GUUUUUGGUGUUU--AUGGAAAC		
<u>hsa circ 0059354 (5' ... 3')</u>	CUCUGCUCCAUGGCUACCUUA 	8mer-1a	943
<u>hsa-miR-548m (3' ... 5')</u>	GUUUUUGGUGUUUAUGGAAAC		
<u>hsa circ 0059354 (5' ... 3')</u>	CCGGCCAAGCCAUCAUUUGCUAC 	7mer-1a	297
<u>hsa-miR-548p (3' ... 5')</u>	UUUCAUUGACGUAAAACGAU		
<u>hsa circ 0059354 (5' ... 3')</u>	GCAGUGGUGGGAUCUCAGCUCAC		

		7mer-1a	3523
<u>hsa-miR-558 (3' ... 5')</u>	UAAAACCAUGUCGUCGAGU		
<u>hsa circ 0059354 (5' ... 3')</u>	GUAAGAGCCUUGGAAAUUAACAA		7mer-1a
<u>hsa-miR-569 (3' ... 5')</u>	UGAAAGGUCCUAAGUAUUUGA		
<u>hsa circ 0059354 (5' ... 3')</u>	CCCCCCCCAAAAUAUCUGUUUCC		7mer-m8
<u>hsa-miR-570 (3' ... 5')</u>	CGUUUCCAUUAACGACAAAAGC		
<u>hsa circ 0059354 (5' ... 3')</u>	UGGAAGGAA AUGUCUCAAGAAC		7mer-1a
<u>hsa-miR-578 (3' ... 5')</u>	UGUUAGGAUCUCGUGUUUCUUC		
<u>hsa circ 0059354 (5' ... 3')</u>	UUAGUCACCCAUUCUGCAAGAAAA		7mer-1a
<u>hsa-miR-578 (3' ... 5')</u>	UGUUAGGAUCUCGUGUUUCUUC		
<u>hsa circ 0059354 (5' ... 3')</u>	UGCAAAAAAGUCUCAACAAGAAG		7mer-m8
			3242

<u>hsa-miR-578 (3' ... 5')</u>	UGUUAGGAUCUCGUGUUCUUC		
<u>hsa circ 0059354 (5' ... 3')</u>	CUGUAUUUAACUGAGCACAAGAU 	7mer-1a	4069
<u>hsa-miR-581 (3' ... 5')</u>	UGACUAGAUCUCUUGUGUUCU		
<u>hsa circ 0059354 (5' ... 3')</u>	AUUC CAGGCAACCAGCACAAGAG 	7mer-1a	501
<u>hsa-miR-581 (3' ... 5')</u>	UGACUAGAUCUCUUGUGUUCU		
<u>hsa circ 0059354 (5' ... 3')</u>	UGUAAAGGACAAAAGACCAGUUU 	7mer-m8	2674
<u>hsa-miR-582-3p (3' ... 5')</u>	CCAAGUCAACAAGUUGGUCAAU		
<u>hsa circ 0059354 (5' ... 3')</u>	UGGGGUUCAGGGAAAG---CUCUUUAG 	7mer-1a	1349
<u>hsa-miR-583 (3' ... 5')</u>	CAUUACCCUGGAAGGAGAAC		
<u>hsa circ 0059354 (5' ... 3')</u>	UAAGAAAAGGGAAUU--CUCUUUAA		

		7mer-1a	3340
<u>hsa-miR-583 (3' ... 5')</u>	CAUUACCCUGGAAGGAGAAC		
<u>hsa circ 0059354 (5' ... 3')</u>	AGGAGACAGGAGAUCACCAUAAG		
		7mer-1a	3847
<u>hsa-miR-584 (3' ... 5')</u>	GAGUCAGGGUCCGUU--UGGUAUU		
<u>hsa circ 0059354 (5' ... 3')</u>	AUUUUGUAUGUUUUAAUGCAUC		
		7mer-m8	4371
<u>hsa-miR-586 (3' ... 5')</u>	CCUGGAUUUUUAUGUUACGUAU		
<u>hsa circ 0059354 (5' ... 3')</u>	AGGCACUUUCUUUCCAUGGAAAC		
		7mer-1a	250
<u>hsa-miR-587 (3' ... 5')</u>	CACUGAGUAGUGGAUACCUUU		
<u>hsa circ 0059354 (5' ... 3')</u>	CUUGCGGCAAGUCUGAUGGAAAG		
		7mer-1a	785
<u>hsa-miR-587 (3' ... 5')</u>	CACUGAGUAGUGGAUACCUUU		
<u>hsa circ 0059354 (5' ... 3')</u>	UUAGAGAGGGAGAGGGGUUCUCC		

			7mer-m8	653
<u>hsa-miR-589 (3' ... 5')</u>	GAGUCUCGUCUGCACCAAGAGU			
<u>hsa circ 0059354 (5' ... 3')</u>	UUCUCACUGGUUAUCACAUGGUUC 	7mer-m8	2584	
<u>hsa-miR-591 (3' ... 5')</u>	UGUUACUCUUGGGUACCAGA			
<u>hsa circ 0059354 (5' ... 3')</u>	CCAUGGAAACAUUUAGACACAAA 	8mer-1a	263	
<u>hsa-miR-599 (3' ... 5')</u>	CAAACAUUUUGACUGUGUUG			
<u>hsa circ 0059354 (5' ... 3')</u>	UAGCAGCAGUUGAACAGAGACA 	8mer-1a	2537	
<u>hsa-miR-593 (3' ... 5')</u>	UCUUUGGGGUCGUCUCUGU			
<u>hsa circ 0059354 (5' ... 3')</u>	UCCCAUCUCACACAA---CACACUUC 	7mer-m8	2411	
<u>hsa-miR-595 (3' ... 5')</u>	UCUGUGUGGUGCCGUGUGAAG			
<u>hsa circ 0059354 (5' ... 3')</u>	CCACGUAAUGCAGACCACACUUU			

			7mer-m8	2433
<u>hsa-miR-595 (3' ... 5')</u>	UCUGUGUGGGUGCCGUGUGAAG			
<u>hsa circ 0059354 (5' ... 3')</u>	UACAGCGGCCAACCAUGACGUG		7mer-m8	3813
<u>hsa-miR-598 (3' ... 5')</u>	ACUGCUACUGUUGCUACUGCAU			
<u>hsa circ 0059354 (5' ... 3')</u>	AGAAGGAUCAGUGAAUGUAAGAG		7mer-1a	729
<u>hsa-miR-600 (3' ... 5')</u>	CUCGUUCCGAGAACAGACAUUCA			
<u>hsa circ 0059354 (5' ... 3')</u>	GACAGGUGCCUUGAA---CGCAGCCC		7mer-m8	1173
<u>hsa-miR-604 (3' ... 5')</u>	CAGGACUUAAGGCGUCGGA			
<u>hsa circ 0059354 (5' ... 3')</u>	CCUCAGCUCCUCUGAGCAGCCAC		7mer-1a	1410
<u>hsa-miR-604 (3' ... 5')</u>	CAGGACUUAAGGCGUCGGA			
<u>hsa circ 0059354 (5' ... 3')</u>	CUCAAGUGCCAGGGAGCAGCCAC			

			7mer-1a	616
<u>hsa-miR-604 (3' ... 5')</u>	CAGGACUUAAAGGCGUCGGA			
<u>hsa circ 0059354 (5' ... 3')</u>	AUUUUGGAAGGGUUCUUUGAAAU		7mer-1a	2515
<u>hsa-miR-607 (3' ... 5')</u>	CAAAUAUCUAGACCUALACUUG			
<u>hsa circ 0059354 (5' ... 3')</u>	GGAGGAGAUAGCCGAGACCCCAG		7mer-1a	150
<u>hsa-miR-615-5p (3' ... 5')</u>	CUAGGCUCGUGGCCCCUGGGGG			
<u>hsa circ 0059354 (5' ... 3')</u>	CAGCUCCCUAUCCUGGACCCU		7mer-m8	347
<u>hsa-miR-615-5p (3' ... 5')</u>	CUAGGCUCGUGGCCCCUGGGGG			
<u>hsa circ 0059354 (5' ... 3')</u>	ACGUUGAUUGUUUUAAAUGACAA		7mer-1a	866
<u>hsa-miR-616 (3' ... 5')</u>	GACGAGUUUGGGAGGUACUGA			
<u>hsa circ 0059354 (5' ... 3')</u>	GAGGGAAGAGGGUUCUCCAGGUU			

			7mer-m8	658
<u>hsa-miR-619 (3' ... 5')</u>	UGACCCGUGUUUGUACAGGUCCAG			
<u>hsa circ 0059354 (5' ... 3')</u>	UUUCUGGUGUGUAUUGCUGCG			
		7mer-m8	4170	
<u>hsa-miR-621 (3' ... 5')</u>	UCCAUUCGCACAAACGAUCGG			
<u>hsa circ 0059354 (5' ... 3')</u>	GGAAGUUUCAGGUUGAAGGGAAA			
		7mer-1a	1128	
<u>hsa-miR-623 (3' ... 5')</u>	UGGGUUGUCGGGGACGUUCCUA			
<u>hsa circ 0059354 (5' ... 3')</u>	GGCCAGAUCACUUUCCAAGGGAG			
		7mer-m8	2326	
<u>hsa-miR-623 (3' ... 5')</u>	UGGGUUGUCGGGGACGUUCCUA			
<u>hsa circ 0059354 (5' ... 3')</u>	AAGCUCUCUUAAGAAAAGGGAAU			
		7mer-1a	3331	
<u>hsa-miR-623 (3' ... 5')</u>	UGGGUUGUCGGGGACGUUCCUA			
<u>hsa circ 0059354 (5' ... 3')</u>	CUGACAGGCCUCAGCAAGGGAG			

		7mer-m8	4331
<u>hsa-miR-623 (3' ... 5')</u>	UGGGUUGUCGGGACGUUCCUA		
<u>hsa circ 0059354 (5' ... 3')</u>	UUGCAAGUUGCCCUCACCUUGUG		7mer-m8
			1280
<u>hsa-miR-624 (3' ... 5')</u>	UCCAUUAUGGUUAUGGAACAC		
<u>hsa circ 0059354 (5' ... 3')</u>	UCCUUCCUCCAUAGG--GACAGCAG		7mer-1a
			1912
<u>hsa-miR-626 (3' ... 5')</u>	UUCUGUAAAAGUCUGUCGA		
<u>hsa circ 0059354 (5' ... 3')</u>	GAUGUAGAAGUCAGCAGACAGCU		7mer-m8
			329
<u>hsa-miR-626 (3' ... 5')</u>	UUCUGUAAAAGUCUGUCGA		
<u>hsa circ 0059354 (5' ... 3')</u>	UGGGGAUGGUGGAAUU--AAGCACAA		7mer-1a
			2826
<u>hsa-miR-636 (3' ... 5')</u>	ACGCCCGCCCUGCUCGUUCGUGU		
<u>hsa circ 0059354 (5' ... 3')</u>	UGGGGAGAGGCUGAAAAGCACAA		

		7mer-1a	2917
<u>hsa-miR-636 (3' ... 5')</u>	ACGCCCCCCCUGCUUCG----UUCGUGU		
<u>hsa circ 0059354 (5' ... 3')</u>	CCAUUGCCCAUAAGACCCCCAGG		
		7mer-m8	222
<u>hsa-miR-637 (3' ... 5')</u>	UGC GUC UCGGG CUUUC -GGGGUCA		
<u>hsa circ 0059354 (5' ... 3')</u>	GUGGAAGUGAGAGGAGAUCCAU		
		7mer-1a	2394
<u>hsa-miR-638 (3' ... 5')</u>	UCCGGCGGUGGGCGGGCGCUAGGGA		
<u>hsa circ 0059354 (5' ... 3')</u>	AAGUGCCAGGGAGCAGCCACACG		
		7mer-m8	619
<u>hsa-miR-644 (3' ... 5')</u>	CGAGAUUCUUUCGGUGUGA		
<u>hsa circ 0059354 (5' ... 3')</u>	UAGCAGGCUGUUUGAGCCUAGC		
		7mer-m8	1623
<u>hsa-miR-645 (3' ... 5')</u>	AGUCGUCAUGG----UCGGAUCU		
<u>hsa circ 0059354 (5' ... 3')</u>	AAAUCUCCCUGUAUGCCUAGAA		

			7mer-1a	710
<u>hsa-miR-645 (3' ... 5')</u>	AGUCCGUCAUGGUCCGAUCU			
<u>hsa circ 0059354 (5' ... 3')</u>	CCUCAGCUCCUCUGAGCAGCCAC			
		7mer-m8	1410	
<u>hsa-miR-647 (3' ... 5')</u>	CUUCCUUACACUCACGUCGGUG			
<u>hsa circ 0059354 (5' ... 3')</u>	GUGAGCCACUGUGGCCAGCCAAA			
		7mer-1a	3752	
<u>hsa-miR-647 (3' ... 5')</u>	CUUCCUUACACUCACGUCGGUG			
<u>hsa circ 0059354 (5' ... 3')</u>	CUCAAAGUGCAGGGAGCAGCCAC			
		7mer-m8	616	
<u>hsa-miR-647 (3' ... 5')</u>	CUUCCUUACACUCA----CGUCGGUG			
<u>hsa circ 0059354 (5' ... 3')</u>	AGGUAAAACACAUUUUAUCCUAU			
		7mer-m8	3177	
<u>hsa-miR-651 (3' ... 5')</u>	GUUUUCAGUUUCGAAUAGGAUU			

<u>hsa_circ_0059354 (5' ... 3')</u>	CC AUG CAA AAA AGU CU CA AC AAG 	7mer-1a	3239
<u>hsa-miR-653 (3' ... 5')</u>	GU CA UC UCU AA ACA AGU UG UG 		
<u>hsa_circ_0059354 (5' ... 3')</u>	UG UUU UAAA UG ACAA -- AGA CA AU AU 	7mer-1a	874
<u>hsa-miR-654-3p (3' ... 5')</u>	UU CC AC AU ACC AG UCG UG UAU 		
<u>hsa_circ_0059354 (5' ... 3')</u>	GG AAA AUG UCG GAGG CU ACC UG CAG 	7mer-1a	1146
<u>hsa-miR-657 (3' ... 5')</u>	GG AU CUC UCCC AC UCU UGG AC GG 		
<u>hsa_circ_0059354 (5' ... 3')</u>	CAC CA AC AACA AAA ACA ACC AAAA 	7mer-1a	3372
<u>hsa-miR-659 (3' ... 5')</u>	AC CCC UGG GAG GG AC UU GGU UC 		
<u>hsa_circ_0059354 (5' ... 3')</u>	AG UC UGG UU UC GU UU UCC AG GC U 	7mer-m8	3495
<u>hsa-miR-661 (3' ... 5')</u>	UG CG CG GU CC GG GU CU C UGG GU CG U 		

<u>hsa_circ_0059354 (5' ... 3')</u>	ACAUUGUAUUAAAUCAGGCAA 	7mer-1a	489
<u>hsa-miR-661 (3' ... 5')</u>	UGC CGC GUCCGGUCUCUGGGUCCGU		
<u>hsa_circ_0059354 (5' ... 3')</u>	GAGAGUGAAGAAAUGGCCACAG 	7mer-1a	3299
<u>hsa-miR-663b (3' ... 5')</u>	GGAGUCCGUGCCGGCCGGUGG		
<u>hsa_circ_0059354 (5' ... 3')</u>	GUAGCCACCAGGAGAGGCUUCCU 	7mer-m8	2014
<u>hsa-miR-671-5p (3' ... 5')</u>	GAGGU CGGGGAGGU CCCGAAGGA		
<u>hsa_circ_0059354 (5' ... 3')</u>	UGUGAAGAGUGGAUUCUGCCUCC 	7mer-m8	918
<u>hsa-miR-1827 (3' ... 5')</u>	UAAGUUAGAUGACGGAGU		
<u>hsa_circ_0059354 (5' ... 3')</u>	AUUCUGCCUCCAUCUCUGCCUCC 	7mer-m8	930

<u>hsa-miR-1827 (3' ... 5')</u>	UAAGUUAGAUGACGGAGU		
<u>hsa circ 0059354 (5' ... 3')</u>	AAUGAUUCGACAGAGGCUGGAGG 	7mer-m8	132
<u>hsa-miR-766 (3' ... 5')</u>	CGACUCCGACACCCCGACCUCA		
<u>hsa circ 0059354 (5' ... 3')</u>	GGUUCUGUUUCCAGGCUGGAGU 	7mer-m8	3500
<u>hsa-miR-766 (3' ... 5')</u>	CGACUCCGACACCCCGACCUCA		
<u>hsa circ 0059354 (5' ... 3')</u>	UCUCCUCAGCUCCUCUGAGCAGC 	7mer-m8	1407
<u>hsa-miR-767-3p (3' ... 5')</u>	UCUUUGGUACCCAUACUCGUCU		
<u>hsa circ 0059354 (5' ... 3')</u>	CUUUGCCACAGUGUGGAGCAGAU 	7mer-1a	2560
<u>hsa-miR-767-3p (3' ... 5')</u>	UCUUUGGUACCCAUACUCGUCU		
<u>hsa circ 0059354 (5' ... 3')</u>	CACAUGUGCUGCUCGUGAGCAGG		

			7mer-m8	536
<u>hsa-miR-767-3p (3' ... 5')</u>	UCUUUGGUACCCAUACUCGUCU			
<u>hsa circ 0059354 (5' ... 3')</u>	UUCAUGUCAUCAAAGGCUUCCU		7mer-m8	1199
<u>hsa-miR-7 (3' ... 5')</u>	UGUUGUUUAGUGAUCAGAAGGU			
<u>hsa circ 0059354 (5' ... 3')</u>	AAAGCACAAAAGAUA--GUCUUCCC		7mer-m8	2931
<u>hsa-miR-7 (3' ... 5')</u>	UGUUGUUUAGUGAUCAGAAGGU			
<u>hsa circ 0059354 (5' ... 3')</u>	AAUGUGGCCGCCCCUUCUUCAG		7mer-1a	3986
<u>hsa-miR-7 (3' ... 5')</u>	UGUUGUUUAGUGAUCAGAAGGU			
<u>hsa circ 0059354 (5' ... 3')</u>	CAGUUUACCUUUGGAGUCUUCCC		7mer-m8	4116
<u>hsa-miR-7 (3' ... 5')</u>	UGUUGUUUAGUGAUCAGAAGGU			
<u>hsa circ 0059354 (5' ... 3')</u>	CCCCAAUGGGAGAAAAGGGCAAG			

			7mer-1a	1454
<u>hsa-miR-874 (3' ... 5')</u>	AGCCAGGGAGCCCGGUCCCCGUC			
<u>hsa circ 0059354 (5' ... 3')</u>	AAUUCUCUUUAAGAAACCACCA			
		8mer-1a	3351	
<u>hsa-miR-876-3p (3' ... 5')</u>	ACUUA AUGAACAU--UUGGUGGU			
<u>hsa circ 0059354 (5' ... 3')</u>	CUCUUAAAAGAAACCACCAA			
		7mer-1a	3355	
<u>hsa-miR-876-3p (3' ... 5')</u>	ACUUA AUGAACAUUUGGUGGU			
<u>hsa circ 0059354 (5' ... 3')</u>	AUCUCGCUGGUGCGUACACAGUG			
		7mer-m8	1063	
<u>hsa-miR-892a (3' ... 5')</u>	GAUGCGUCUUUCCUGUGUCAC			
<u>hsa circ 0059354 (5' ... 3')</u>	GCAAGAGGAUUCUGGAUUAAG			
		7mer-m8	3016	
<u>hsa-miR-889 (3' ... 5')</u>	UGUUACCAACAGGCUAUAU			

<u>hsa_circ_0059354 (5' ... 3')</u>	UCCUGUCUCAGCCUCCCAAGUAG 	7mer-1a	3578
<u>hsa-miR-890 (3' ... 5')</u>	GUUGACUACGGAAAGGUUCAU		
<u>hsa_circ_0059354 (5' ... 3')</u>	CCUCUGGGUUCUUGCAAGUUGC 	7mer-m8	1269
<u>hsa-miR-891b (3' ... 5')</u>	AGUUACUGAGUCCAUCUACGU		
<u>hsa_circ_0059354 (5' ... 3')</u>	GAGCGAUACUAAGGCAGACUCAG 	7mer-1a	2346
<u>hsa-miR-924 (3' ... 5')</u>	CGUUCUGUAGUGUUCUGAGA		
<u>hsa_circ_0059354 (5' ... 3')</u>	UGUUUUACUGUAUUUAACUGAG 	7mer-1a	4061
<u>hsa-miR-935 (3' ... 5')</u>	CGCCAUCGCCUUCGCCAUUGACC		
<u>hsa_circ_0059354 (5' ... 3')</u>	UGAAGCCUCAUCUUGCUACUGAG 	7mer-1a	1324
<u>hsa-miR-936 (3' ... 5')</u>	GACGCUAAGGGAGGGAGAUGACA		

<u>hsa_circ_0059354 (5' ... 3')</u>	ACCCCAAUGGGAGAAAAGGGCAA 	7mer-1a	1453
<u>hsa-miR-938 (3' ... 5')</u>	UGACCCAAGUGGAAAUUCCGU		
<u>hsa_circ_0059354 (5' ... 3')</u>	CCUUGGAGGACUUGGGAGAAGAA 	7mer-1a	2175
<u>hsa-miR-942 (3' ... 5')</u>	GUGUACCGGUUUUGUCUCUUCU		
<u>hsa_circ_0059354 (5' ... 3')</u>	CUACCUUUAGGAGACAGAGAAGA 	8mer-1a	957
<u>hsa-miR-942 (3' ... 5')</u>	GUGUACCGGUUUUGUCUCUUCU		

dictionaries								context
CircRN A End	3' pairing	local AU	position	TA	SPS	context + score + score	percent ile	context
541	0.04	0.059	0.014	-0.001	-0.038	-0.046	61	
1154	0.001	0.003	0.076	0.027	-0.037	-0.004	47	
1847	0.004	0.019	0.114	0.027	-0.037	0.053	18	
4129	0.001	0.024	-0.018	0.027	-0.037	-0.077	68	

1493	0.001	0.046	0.113	0.022	-0.034	0.074	13
114	0.003	-0.006	-0.047	-0.066	-0.101	-0.337	90
285	0.003	0.034	-0.022	-0.066	-0.101	-0.272	83
1154	0.003	-0.007	0.176	0.046	-0.112	-0.141	87
1847	0.001	0.019	0.114	0.028	-0.037	0.051	23

4129	0.003	0.051	-0.041	0.046	-0.112	-0.3	97
3780	-0.008	-0.03	0.047	-0.005	0.041	-0.202	96
3519	-0.009	0.037	0.048	0.023	-0.1	-0.075	77
3650	0.003	0.001	0.047	0.023	-0.079	-0.125	87
4094	0.001	0.015	-0.015	0.023	-0.1	-0.15	91

987	0.012	0.021	0.077	-0.028	-0.04	-0.078	60
524	0.004	0.043	0.007	0.001	-0.067	-0.086	66
3136	0.004	0.021	0.09	0.022	0	0.063	23
652	-0.016	0.048	0.03	0.022	-0.02	-0.056	70

1705	-0.009	0.048	0.114	0.009	-0.017	0.071	5
2203	-0.039	0.008	0.265	-0.033	0.072	0.026	38
2322	-0.025	0.008	0.151	-0.014	0.008	0.008	64
720	0.001	0.015	0.028	0.017	-0.011	-0.024	65
3954	0.001	-0.03	0.001	-0.015	-0.003	-0.12	84

1659	-0.016	0.06	0.151	0.021	0.01	0.106	10
3093	0.001	0.011	0.095	-0.004	-0.015	0.014	42
46	0.012	-0.06	-0.056	-0.004	0.002	-0.226	96
1355	0.003	0.062	0.226	0.022	0.023	0.089	24

3346	0.008	-0.017	0.067	0.013	0.042	0.039	56
3144	0.003	-0.019	0.119	-0.024	0.012	-0.029	58
3519	-0.006	0.037	0.048	0.004	-0.1	-0.091	78
4094	0.008	0.015	-0.015	0.004	-0.1	-0.162	89
1209	-0.009	0.029	0.082	0.009	-0.069	-0.032	45

2455	-0.016	-0.029	0.151	0.009	-0.073	-0.078	63
1484	0.012	0.03	0.147	-0.009	-0.075	-0.015	20
1437	-0.013	0.012	0.107	0.01	0.038	0.08	42
1312	0.001	0.033	0.093	-0.003	0.032	0.082	14
3972	0.001	-0.009	-0.001	-0.003	0.032	-0.054	83

3994	0.04	0.016	-0.002	0.02	-0.001	-0.047	69	
2536	0.003	0.003	0.151	0.038	0.069	0.144	30	
151	0.001	0.035	-0.034	-0.052	-0.085	-0.209	88	
3442	0.003	-0.03	0.133	-0.083	-0.14	-0.364	98	

634	0.003	0.01	0.027	0.016	-0.018	-0.082	82
1579	0.008	0.038	0.114	0.008	-0.016	0.078	11
1829	0.003	0.021	0.151	0.009	-0.032	0.032	25
4090	0.021	0.044	-0.015	0.009	-0.032	-0.093	80
850	0.011	-0.026	0.042	0.008	-0.031	-0.07	68

4325	0.003	0.017	-0.049	0.009	-0.083	-0.223	94
849	0.015	-0.029	0.042	0.005	-0.047	-0.088	67
1249	-0.016	0.078	0.114	0.042	0.104	0.202	12
2624	-0.016	-0.053	0.151	0.012	-0.05	-0.076	68
4095	0.001	0.013	-0.015	0.012	-0.069	-0.132	81

2029	0.001	0.037	0.114	0	0.031	0.109	5
2772	-0.006	0.03	0.114	0	0.031	0.095	9
1369	0.001	0.055	0.099	0.01	-0.032	0.059	5
2954	0.001	0.015	0.11	0.01	-0.032	0.03	30
2224	-0.002	0.011	0.114	0.001	-0.052	-0.002	32

2877	-0.006	0.025	0.114	0.005	0.022	0.086	13
4385	0.001	-0.023	-0.046	0.005	0.022	-0.115	90
2270	0.008	0.018	0.114	-0.005	-0.029	0.032	23
4407	-0.007	-0.113	-0.06	-0.006	0.004	-0.302	98
1799	0.003	0.063	0.151	-0.024	0.038	0.111	0

2463	-0.006	0.034	0.114	0.005	0.005	0.078	16
2349	0.012	-0.043	0.151	-0.01	-0.073	-0.083	53
333	0.004	0.046	-0.014	-0.01	-0.056	-0.104	60
544	0.004	0.01	0.009	0.02	-0.063	-0.094	70
2496	0.004	-0.012	0.114	-0.018	-0.005	0.009	36

4035	0.001	0.06	-0.008	0.015	0.021	0.015	62
1307	-0.002	0.009	0.092	0.003	-0.012	0.016	40
2400	0.003	0.008	0.151	-0.011	-0.04	-0.009	39
2400	0.012	0.008	0.151	-0.011	-0.04	6.94E-18	NA
1786	-0.007	0.071	0.151	0.029	-0.115	0.009	13

4242	0.003	0.015	-0.037	0.014	0.021	-0.104	92
4158	-0.044	0.053	-0.025	0.025	0.065	-0.046	90
2027	0.001	0.041	0.114	0.038	0.081	0.201	3
3233	-0.002	0.004	0.08	0.012	0.027	0.047	51

3233	0.004	0.004	0.08	0.012	0.027	0.053	49
2071	-0.007	-0.051	0.151	0.003	-0.033	-0.057	76
2503	-0.016	-0.014	0.151	0.043	0.12	0.164	61
3769	-0.016	-0.019	0.03	0.043	0.12	0.038	91
2053	-0.006	0.004	0.114	0.022	-0.015	0.045	30

908	0.003	-0.006	0.113	0.037	-0.063	-0.163	93
1645	0.012	0.085	0.151	-0.018	-0.047	0.063	4
1645	0.003	0.085	0.151	-0.018	-0.047	0.054	7
241	-0.016	-0.021	-0.029	-0.018	-0.047	-0.251	95
241	0.003	-0.021	-0.029	-0.018	-0.047	-0.232	94

2099	0.024	-0.046	0.265	0.039	-0.007	0.028	34
2078	0.004	0.002	0.114	0.022	0.027	0.095	22
2078	0.004	0.002	0.114	0.022	0.027	0.095	22
2549	-0.007	0.009	0.151	0.029	0.039	0.101	57
2549	-0.007	0.009	0.151	0.029	0.039	0.101	57

1063	0.001	0.029	0.066	-0.091	-0.049	-0.118	50
1041	0.003	-0.012	0.147	0.007	0.019	-0.083	82
1451	0.001	0.011	0.108	0.023	-0.065	0.004	40
2178	-0.016	0.011	0.114	0.023	-0.065	-0.007	47

2625	0.003	-0.088	0.151	0.023	-0.069	-0.1	80
1681	-0.007	0.023	0.151	0.025	0.065	0.137	22
2131	0.021	-0.042	0.151	0.025	0.065	0.1	54
1266	-0.025	0.055	0.117	0	0.018	0.045	47
2516	0.012	-0.015	0.151	0	0.018	0.046	46

2120	0.008	-0.01	0.114	0.073	0.134	0.245	27
842	-0.002	0.035	0.041	0.073	0.134	0.207	59
2682	-0.013	-0.013	0.114	0.017	0.044	0.075	47
2722	0.001	0.016	0.114	0.017	0.044	0.118	19
4107	0.001	0.048	-0.016	0.017	0.044	0.02	71

472	-0.007	0.03	0.004	0.021	0.098	0.026	84
4112	-0.035	0.019	-0.018	0.007	0.05	-0.097	92
950	-0.018	0.111	0.124	0.013	0.076	0.059	44
303	0.004	0.052	-0.018	0.03	0.027	0.021	78

3529	-0.006	0.045	0.047	0.01	-0.052	-0.03	54
751	0.001	-0.009	0.031	-0.006	0.085	0.028	77
3224	-0.007	-0.007	0.107	0.041	0.069	0.083	66
1042	0.008	0.021	0.063	0.017	0.042	0.077	42
3041	0.001	0	0.101	0.017	0.042	0.087	35
3248	0.012	-0.018	0.104	0.017	0.053	0.048	57

4075	0.001	0.002	-0.012	-0.01	0.007	-0.086	80
507	0.008	0.038	0.005	-0.01	0.007	-0.026	65
2680	0.012	-0.037	0.151	-0.009	0.004	0.001	47
1355	-0.009	0.045	0.098	0.022	0.042	0.124	10

3346	-0.013	-0.017	0.067	0.022	0.042	0.027	68
3853	-0.006	0.025	0.012	-0.019	0.014	-0.048	80
4377	0.012	-0.08	-0.056	0.005	0.05	-0.189	97
256	0.001	0.014	-0.023	0.023	0.021	-0.038	78
791	0.001	0.004	0.036	0.023	0.021	0.011	68

659	-0.007	0.035	0.031	-0.004	-0.023	-0.088	83
2590	0.003	-0.041	0.151	-0.021	-0.022	-0.05	56
270	0.003	0.009	-0.048	0.01	0.016	-0.257	98
2544	0.024	-0.02	0.265	0.023	-0.045	0	64
2417	-0.025	0.002	0.151	-0.005	0.02	0.023	57

2439	0.012	0.012	0.151	-0.005	0.02	0.07	22
3819	0.003	0.037	0.023	-0.089	0.014	-0.132	63
735	-0.002	0.017	0.03	0.001	0.035	0.007	71
1179	-0.016	-0.03	0.104	-0.003	-0.099	-0.164	77
1416	-0.002	0.033	0.104	-0.002	-0.104	-0.045	29

622	0.001	0.048	0.017	-0.002	-0.104	-0.114	63
2521	0.001	-0.003	0.114	0.051	0.078	0.167	34
156	-0.002	0.049	-0.034	-0.002	-0.105	-0.168	70
353	0.012	0.029	-0.013	-0.002	-0.121	-0.215	82
872	0.011	-0.033	0.045	-0.003	0.034	-0.02	72

664	0.012	0.021	0.031	-0.006	-0.049	-0.111	76
4176	0.012	-0.055	-0.027	-0.047	-0.04	-0.277	93
1134	0.001	0.008	0.073	0.014	-0.028	-0.006	59
2332	0.003	0.037	0.151	0.014	-0.031	0.054	15
3337	0.004	-0.016	0.068	0.014	-0.028	-0.032	69

4337	-0.016	0.042	-0.05	0.014	-0.031	-0.161	93
1286	0.012	0.058	0.119	-0.004	0.004	0.069	16
1918	-0.006	0.045	0.114	-0.005	-0.056	0.018	17
335	0.003	0.071	-0.015	-0.005	-0.037	-0.103	66
2832	-0.006	0.009	0.114	0.001	-0.013	0.031	32

2923	-0.006	0.003	0.114	0.001	-0.013	0.025	36
228	-0.025	-0.006	-0.03	0.028	-0.112	-0.265	95
2400	0.015	0.03	0.114	-0.038	-0.058	-0.011	15
625	0.012	0.023	0.026	0.002	-0.071	-0.128	80
1629	-0.016	0.059	0.151	-0.023	-0.036	0.015	17

716	0.001	-0.005	0.028	-0.022	-0.055	-0.127	83
1416	0.003	0.008	0.138	0.01	-0.084	-0.045	46
3758	-0.002	0.012	0.022	0.01	-0.063	-0.095	61
622	-0.025	0.032	0.025	0.01	-0.084	-0.162	80
3183	0.003	-0.075	0.113	-0.002	0.044	-0.037	81

3245	0.008	-0.004	0.078	-0.004	0.021	0.025	55
880	-0.006	-0.014	0.046	-0.003	0.018	-0.033	70
1152	-0.002	0.034	0.075	-0.004	-0.066	-0.037	48
3378	0.004	-0.026	0.064	0.008	0.027	0.003	70
3501	0.012	-0.021	0.068	0.039	-0.115	-0.137	87

495	0.008	-0.011	0.003	0.039	-0.1	-0.135	87
3305	0.008	-0.006	0.072	0.004	-0.104	-0.1	54
2020	-0.007	-0.024	0.151	0.007	-0.069	-0.062	59
924	0.012	-0.024	0.068	0.039	-0.069	-0.094	85
936	-0.007	0	0.07	0.039	-0.069	-0.087	84

138	0.012	0.048	-0.043	0.031	-0.069	-0.141	87
3506	-0.007	0.056	0.067	0.031	-0.069	-0.042	64
1413	0.012	0.069	0.137	0.011	-0.034	0.075	7
2566	0.001	-0.008	0.114	0.011	-0.052	-0.008	45

542	-0.007	0.052	0.014	0.011	-0.034	-0.084	70
1205	-0.025	0.021	0.108	0.014	-0.023	-0.025	63
2937	-0.035	-0.042	0.148	0.014	-0.023	-0.058	74
3992	0.008	0.035	-0.003	0.014	-0.017	-0.037	67
4122	0.021	0.017	-0.02	0.014	-0.023	-0.111	88

1460	0.004	0.015	0.109	0.008	-0.079	-0.017	39
3358	-0.029	-0.025	0.154	-0.005	-0.059	-0.211	95
3361	0.001	-0.02	0.066	-0.004	-0.066	-0.097	75
1069	0.003	0.057	0.089	0.001	0.001	0.031	36
3022	0.003	0.035	0.136	0.017	0.098	0.169	18

3584	-0.002	0.042	0.041	-0.001	-0.009	-0.003	62
1275	0.003	0.07	0.118	-0.014	0.02	0.077	9
2352	0.001	0.024	0.114	-0.008	-0.02	0.037	28
4067	0.008	0.009	-0.012	-0.003	0.035	-0.037	81
1330	-0.002	0.017	0.095	-0.011	-0.002	0.023	32

1459	0.008	0.012	0.109	-0.012	-0.063	-0.02	30
2181	0.001	0.001	0.114	0.023	0	0.065	35
964	0.024	0.057	0.128	0.039	0.02	0.021	55