

## *RNAhybrid of the three gene-microRNA outlier pairs:*

### **1. gene ENSG00000151553 / microRNA 199b-3p**

RNAhybrid -s 3utr\_human -m 100000 -t examples/ENSG00000151553.fasta -q RNAhybrid/199b-3p.fasta

#### result:

target: 10  
length: 79289  
miRNA : hsa-miR-199b-3p  
length: 22

mfe: -29.3 kcal/mol  
p-value: 0.998235

position 54049  
target 5' G C UGCGGAA G 3'  
GACUG UGUGC GGACUGCUGU  
UUGGU ACACG UCUGAUGACA  
miRNA 3' A U 5'

### **2. gene ENSG00000157778 / microRNA 500a-5p**

RNAhybrid -s 3utr\_human -m 100000 -t examples/ENSG00000157778.fasta -q RNAhybrid/500a-5p.fasta

#### result:

target: ENSG00000157778  
length: 3674  
miRNA : hsa-miR-500a-5p  
length: 23

mfe: -28.5 kcal/mol  
p-value: 0.593799

position 1725  
target 5' C G 3'  
CACCCAGGUGGU  
GUGGGUCCAUCG  
miRNA 3' AGA UUCCUAAU 5'

### 3. gene ENSG00000143195 / microRNA 199b-3p

RNAhybrid -s 3utr\_human -m 100000 -t examples/ENSG00000143195.fasta -q RNAhybrid/199b-3p.fasta

#### result:

target: c hromosome:GRCh38:1:166895111:166976140:-1  
length: 81032  
miRNA : hsa-miR-199b-3p  
length: 22

mfe: -28.3 kcal/mol  
p-value: 0.999884

position 41570

target	5'	G		CU		G			C		A	3'
				AGCCA		GUG		GCAGGCU		CUG		
				UUGGU		UAC		CGUCUGA		GAC		
miRNA	3'	A				A				U		A 5'