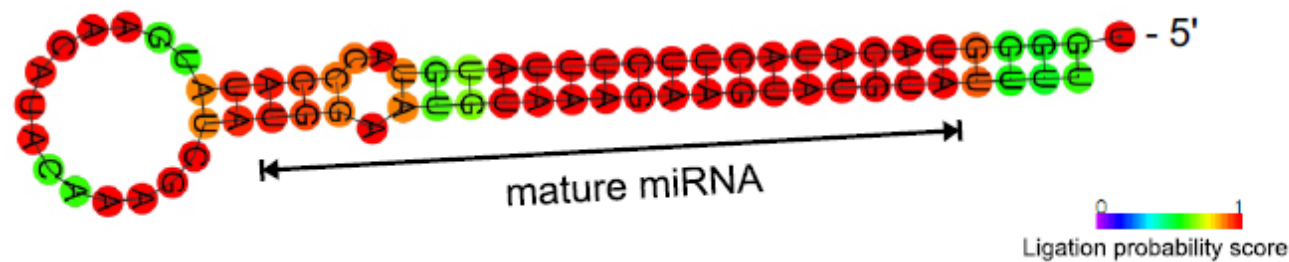
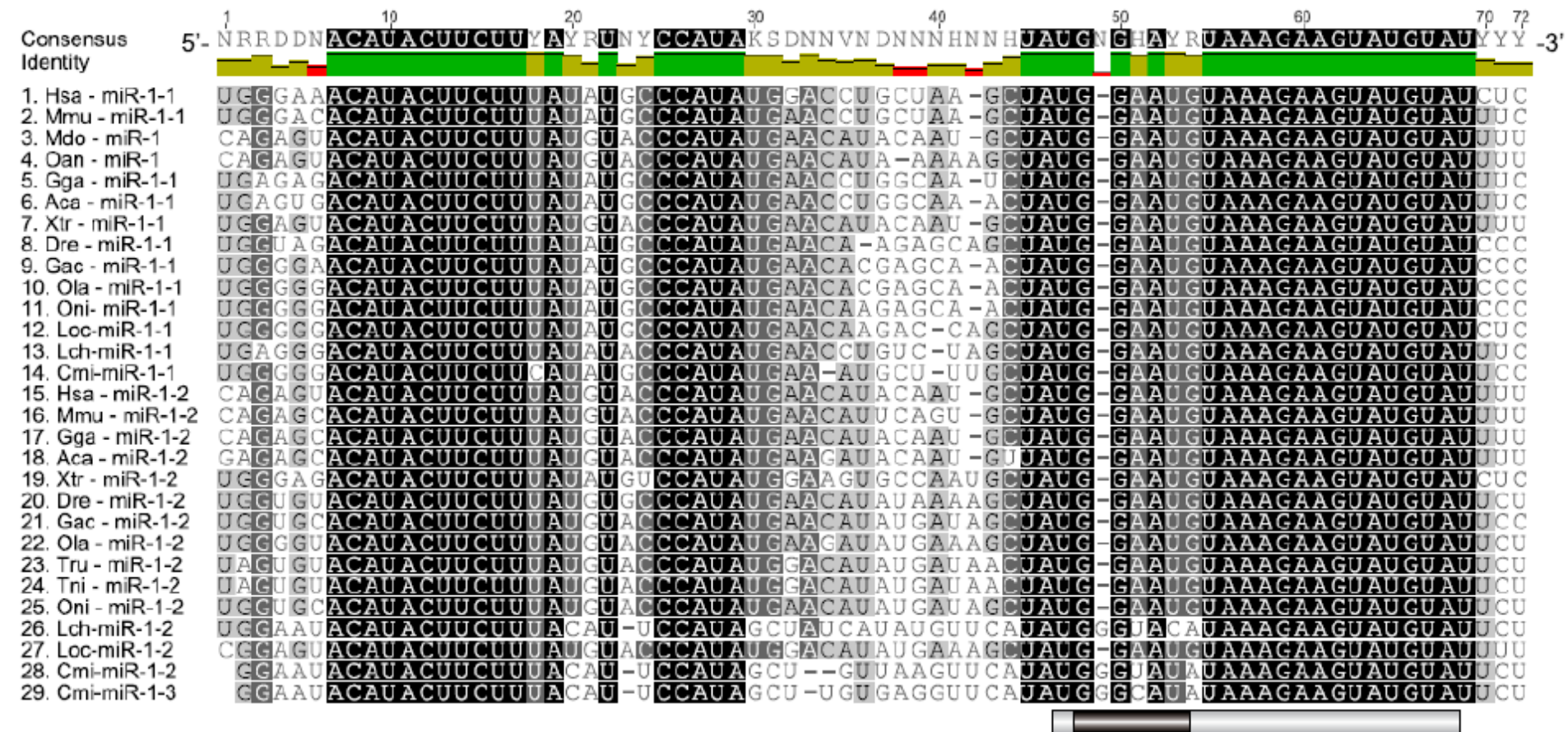


EVOLUTION AND GENOMIC ORGANIZATION OF MUSCLE MICRORNAS IN FISH GENOMES

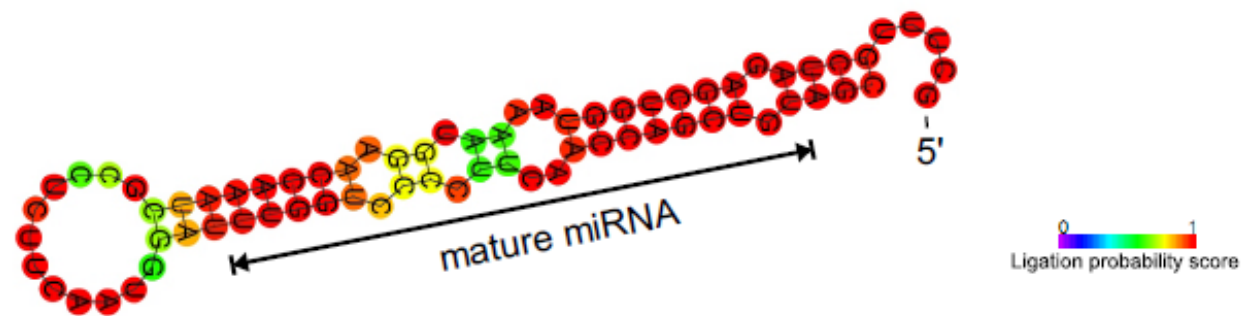
Additional file 1: Multiple alignments of precursor sequences of the muscle-enriched miRNAs between vertebrate species and the secondary structure of consensus sequence. Light gray bar indicates mature sequence; Black gray bar indicates seed sequence.

Alignment of miR-1

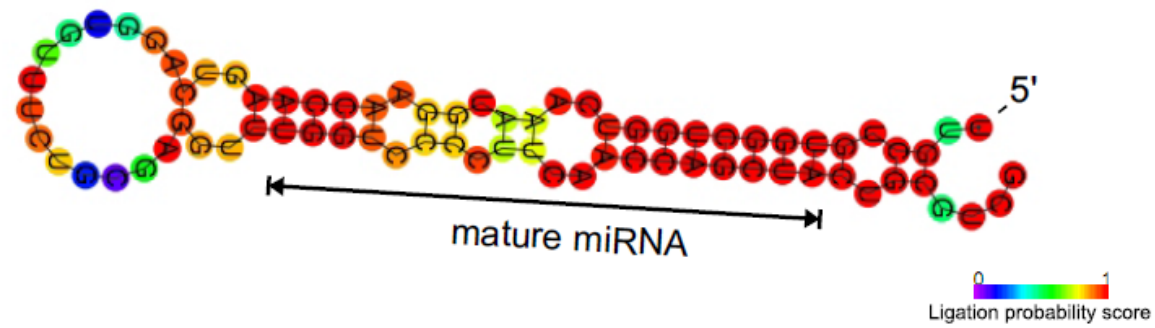
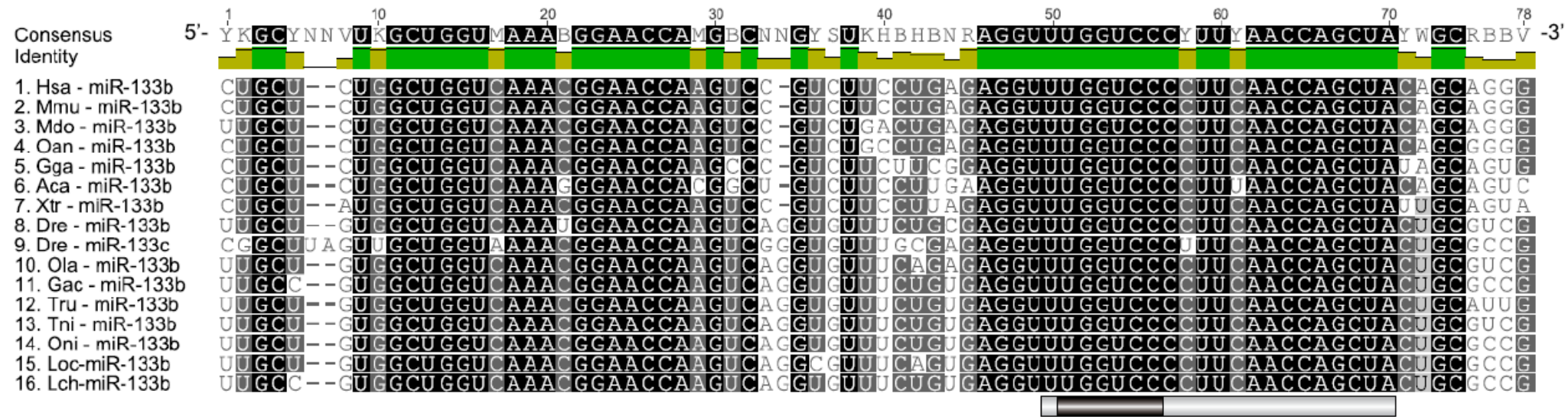


Alignment of miR-133a

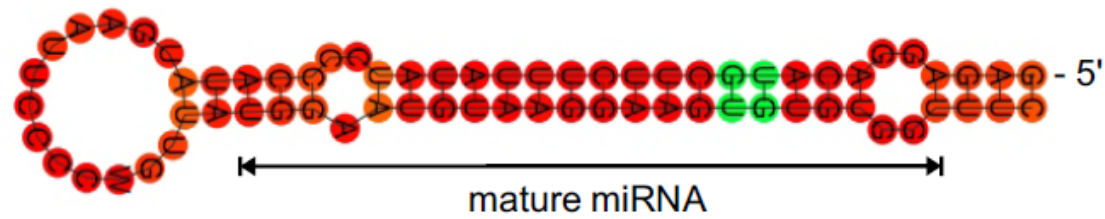
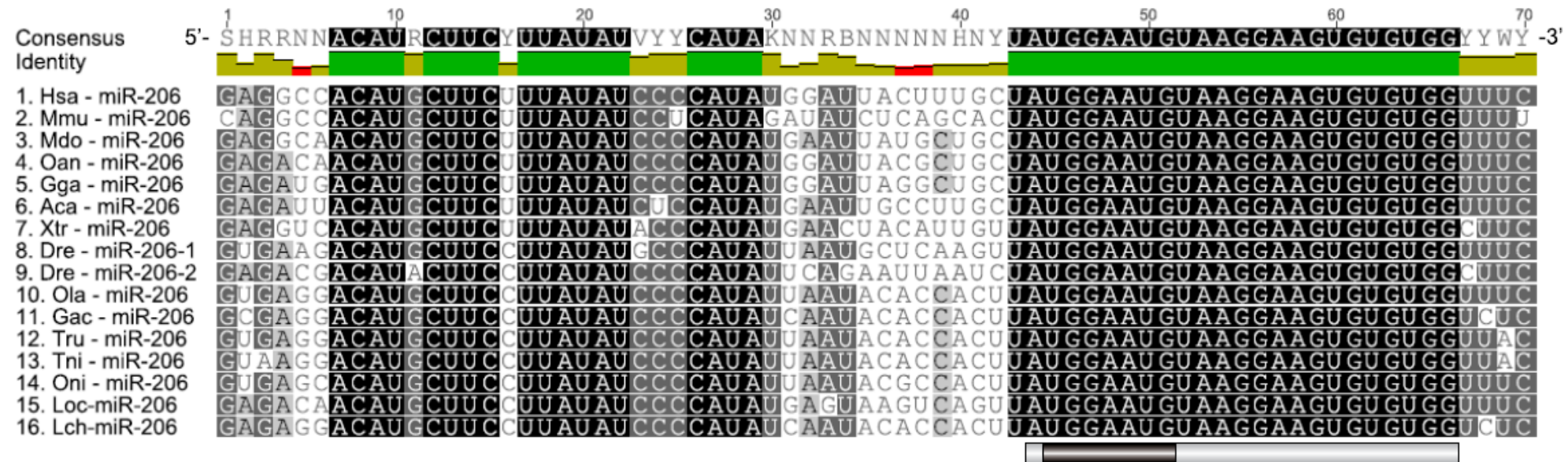
	1	10	20	30	40	50	60	70	73											
Consensus	5'-NNNN	USCU	RV	AGCUGGU	HRAAA	KRG	RACCA	RAUC	NVYUN	HHNN	VBK	G	AUUUGGU	CC	MUUY	W	ACCAGY	UKY	AGS	-3'
Identity	[Color-coded bar showing identity levels for each position]																			
1. Hsa - miR-133a-1	GCUUUGCUAGAGCUGGUAAAAUGGAACCAAAUCCUUCUUCAAUUGGAUUUGGUCCCCUUCACCAGCUGUAGC																			
2. Mmu - miR-133a-1	UGCUAAAGCUGGUAAAAUGGAACCAAAUCCUUCUUCAAUUGGAUUUGGUCCCCUUCACCAGCUGUAGC																			
3. Mdo - miR-133a	GCUUUGCUAAAGCUGGUAAAAUGGAACCAAAUCCUUCUUCAAUUGGAUUUGGUCCCCUUCACCAGCUGUAGC																			
4. Oan - miR-133a	GCUUUGCUAAAGCUGGUAAAAUGGAACCAAAUCCUUCUUCAAUUGGAUUUGGUCCCCUUCACCAGCUGUAGC																			
5. Gga - miR-133a-1	GCUUUGCUAAAGCUGGUAAAAUGGAACCAAAUCCUUCUUCAAUUGGAUUUGGUCCCCUUCACCAGCUGUAGC																			
6. Aca - miR-133a-1	GCUUUGCUAAAGCUGGUAAAAUGGAACCAAAUCCUUCUUCAAUUGGAUUUGGUCCCCUUCACCAGCUGUAGC																			
7. Xtr - miR-133a-1	GCAAUUCUACAGCUGGUUGAAGGGGACCAAAUCCAUUGAAGAGGU GAUUUGGUUCCAUUJUACCAGCUJUAGC																			
8. Dre - miR-133a-1	GCUUUGCUAAAGCUGGUAAAAUGGAACCAAAUCCUUCUUCAAUUGGAUUUGGUCCCCUUCACCAGCUGUAGC																			
9. Gac - miR-133a-1	GCUUUGCUAAAGCUGGUAAAAUGGAACCAAAUCCUUCUUCAAUUGGAUUUGGUCCCCUUCACCAGCUGUAGC																			
10. Ola - miR-133a-1	GCUUUGCUAAAGCUGGUAAAAUGGAACCAAAUCCUUCUUCAAUUGGAUUUGGUCCCCUUCACCAGCUGUAGC																			
11. Tru - miR-133a-1	GCUUUGCUAAAGCUGGUAAAAUGGAACCAAAUCCUUCUUCAAUUGGAUUUGGUCCCCUUCACCAGCUGUAGC																			
12. Tni - miR-133a-1	GCUUUGCUAAAGCUGGUAAAAUGGAACCAAAUCCUUCUUCAAUUGGAUUUGGUCCCCUUCACCAGCUGUAGC																			
13. Oni - miR-133a-1	GCUUUGCUAAAGCUGGUAAAAUGGAACCAAAUCCUUCUUCAAUUGGAUUUGGUCCCCUUCACCAGCUGUAGC																			
14. Loc-miR-133a-1	GCUUUGCUAAAGCUGGUAAAAUGGAACCAAAUCCUUCUUCAAUUGGAUUUGGUCCCCUUCACCAGCUGUAGC																			
15. Lch-miR-133a-1	GCUUUGCUAAAGCUGGUAAAAUGGAACCAAAUCCUUCUUCAAUUGGAUUUGGUCCCCUUCACCAGCUGUAGC																			
16. Cmi-miR-133a-1	UCCUACAGCUGGUUGAAGGGGACCAAAUCCAUUGAAGAGUUGAUUUGGUUCCAUUJUACCAGCUJUAGC																			
17. Hsa - miR-133a-2	GCUUUGCUAGAGCUGGUAAAAUGGAACCAAAUCCUUCUUCAAUUGGAUUUGGUCCCCUUCACCAGCUGUAGC																			
18. Mmu - miR-133a-2	GCUUUGCUAAAGCUGGUAAAAUGGAACCAAAUCCUUCUUCAAUUGGAUUUGGUCCCCUUCACCAGCUGUAGC																			
19. Gga - miR-133a-2	GCUUUGCUAAAGCUGGUAAAAUGGAACCAAAUCCUUCUUCAAUUGGAUUUGGUCCCCUUCACCAGCUGUAGC																			
20. Aca - miR-133a-2	GCUUUGCUAAAGCUGGUAAAAUGGAACCAAAUCCUUCUUCAAUUGGAUUUGGUCCCCUUCACCAGCUGUAGC																			
21. Xtr - miR-133a-2	GCUUUGCUAAAGCUGGUAAAAUGGAACCAAAUCCUUCUUCAAUUGGAUUUGGUCCCCUUCACCAGCUGUAGC																			
22. Dre - miR-133a-2	GCUUUGCUAAAGCUGGUAAAAUGGAACCAAAUCCUUCUUCAAUUGGAUUUGGUCCCCUUCACCAGCUGUAGC																			
23. Gac - miR-133a-2	GCUUUGCUAAAGCUGGUAAAAUGGAACCAAAUCCUUCUUCAAUUGGAUUUGGUCCCCUUCACCAGCUGUAGC																			
24. Ola - miR-133a-2	GCUUUGCUAAAGCUGGUAAAAUGGAACCAAAUCCUUCUUCAAUUGGAUUUGGUCCCCUUCACCAGCUGUAGC																			
25. Oni - miR-133a-2	GCUUUGCUAAAGCUGGUAAAAUGGAACCAAAUCCUUCUUCAAUUGGAUUUGGUCCCCUUCACCAGCUGUAGC																			
26. Loc-miR-133a-2	GCUUUGCUAAAGCUGGUAAAAUGGAACCAAAUCCUUCUUCAAUUGGAUUUGGUCCCCUUCACCAGCUGUAGC																			
27. Lch-miR-133a-2	GCUUUGCUAAAGCUGGUAAAAUGGAACCAAAUCCUUCUUCAAUUGGAUUUGGUCCCCUUCACCAGCUGUAGC																			
28. Cmi-miR-133a-2	UGCUAAAGCUGGUAAAAAGAGAACCAAGAUUGAUUGUUCACACGGAUUUGGUCCCCUUCACCAGCUGUAGC																			
29. Cmi-miR-133a-3	UGCUAAAGCUGGUAAAAUGGAACCAAAUCCUUCUUCAAUUGGAUUUGGUCCCCUUCACCAGCUGUAGC																			



Alignment of miR-133b

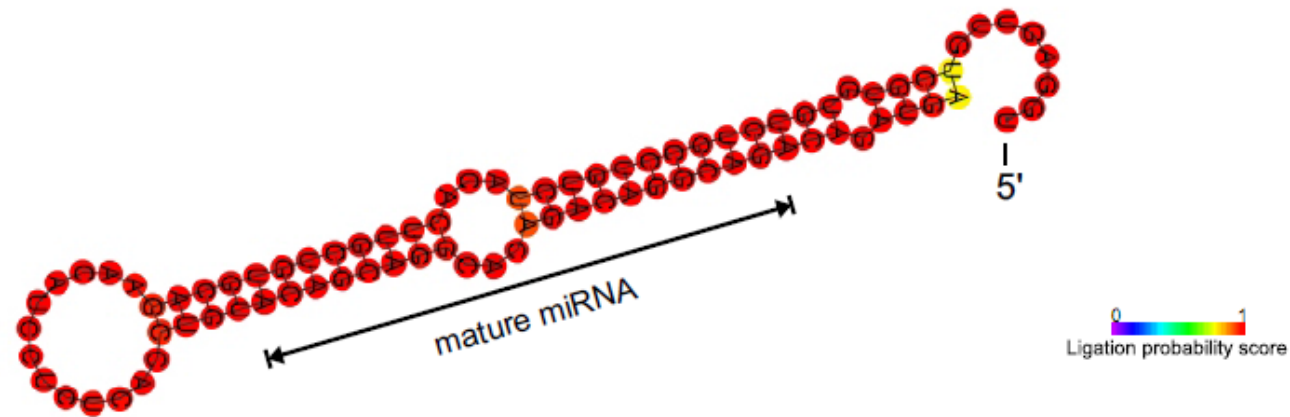
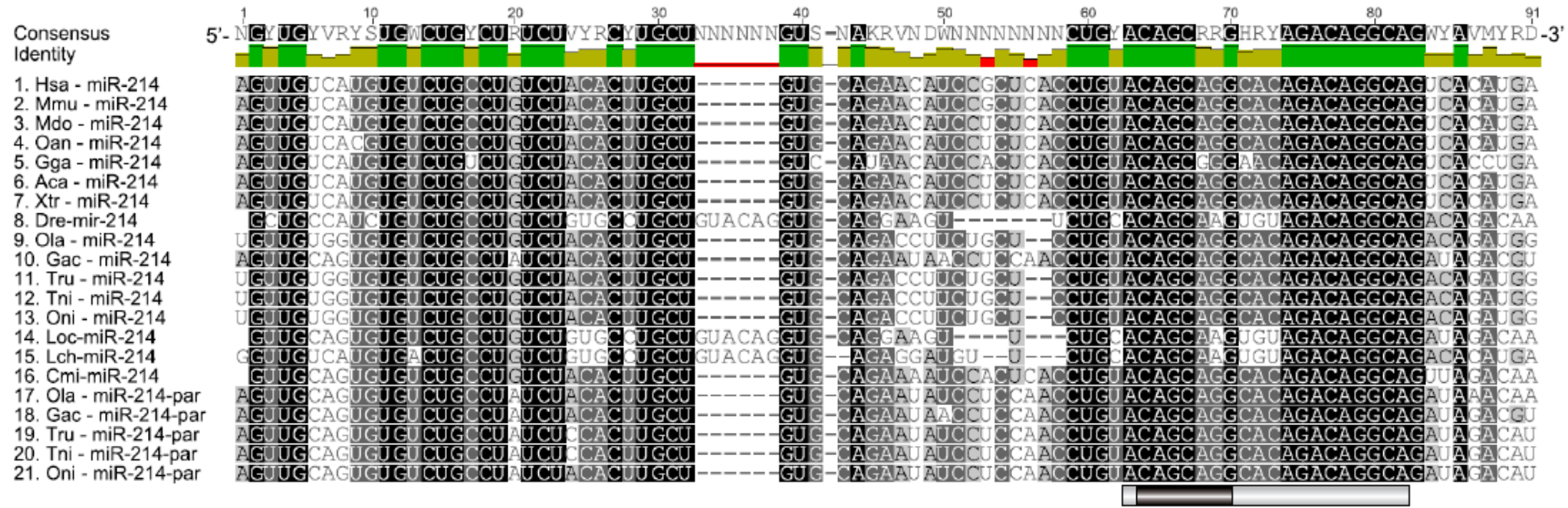


Alignment of miR-206



0 1
Ligation probability score

Alignment of miR-214



Alignment of miR-499

