

Evolution, characterization and expression analysis of Sox gene family in rainbow trout (*Oncorhynchus mykiss*)

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Electronic Supplementary Material (ESM)

[Table S1](#). Primers used for the quantitative real-time PCR (RT-qPCR)

[Table S2](#). All species accession numbers of Sox

Table S1. Primers used for the quantitative real-time PCR (RT-qPCR)

Gene name	Accession No.	Primer sequence (5' to 3')
<i>Sox1a</i>	XM_021578776.2	F: 5'- GGGGCAAACGGGTCCAAA-3' R: 5'-CAGCCTCTGACATCACCTTCCA -3'
<i>Sox1b</i>	XM_021608575.2	F: 5'-AGACCGAGACGGAAGACCA-3' R: 5'- CATCCCTAGACCGACACCC-3'
<i>Sox2</i>	XM_021599151.2	F: 5'-TACTCTGCCAGGTGGACTT-3' R: 5'-ATCTGTGCGGTGTTGTGA-3'
<i>Sox3</i>	XM_021583862.2	F: 5'- CGGGCAACAAGAACAACA-3' R: 5'-GAAGTCCTCCAGGCAAAGA-3'
<i>Sox4a</i>	XM_021572761.2	F: 5'-ACCCTTCAACATCCTCACC -3' R: 5'- TGTAGCTCGAACCGCTCA -3'
<i>Sox4b</i>	XM_021593876.2	F: 5'-GCCCAGAAAGAAGGTGAA -3' R: 5'- CGCCCGCATAGTAGTGTAG-3'
<i>Sox5</i>	NM_001164068.1	F: 5'- AAATCCTCGGTTCTCGTTG-3' R: 5'- GGGTCTCGTCTCCCTTGA-3'
<i>Sox6a</i>	XM_036964052.1	F: 5'- TTCCCTGTACTCCTTCCG-3' R: 5'- CACTGGTGTGAGCCTTT-3'
<i>Sox6b</i>	NM_001124544.1	F: 5'- GTTCCCTGTACTCCTTCCG-3' R: 5'- GTCGCTGTTTCTCCATCTGT-3'
<i>Sox7</i>	XM_021601136.2	F: 5'- AACTACAAGTATCGCCCTCG-3' R: 5'- CTCGTCCTTATCCAAACCC-3'
<i>Sox8a</i>	XM_036939138.1	F: 5'-GGACCAATACCCTCATCTGC-3' F: 5'-TCCGCTTCCTCCACAAAT-3'
<i>Sox8b</i>	XM_021575885.2	F: 5'- GTACCCGCATCTCCACAA-3' R: 5'- GAGTTACACTGACCTGGCTTG-3'
<i>Sox9a</i>	XM_021575875.2	F: 5'-AGCGAGCAGACGCACATA -3' R: 5'- GGTCCACCTTTCCCACTT-3'
<i>Sox9b</i>	XM_036941796.1	F: 5'- GTTACGACTGGACCTTGGTG-3' R: 5'- AAGCGTTCAGCCTCCTCTA-3'
<i>Sox10</i>	XM_021625106.2	F: 5'- GGTGCTGAACGGCTACGA-3' R: 5'- CGATTGGCTATGGCTGACT-3'
<i>Sox11a</i>	XM_021584477.2	F: 5'-GAGGCTACAGATTGAGAGG -3' R: 5'- TTTGATCATTTCTTACCG-3'
<i>Sox11b</i>	NM_001124183.1	F: 5'- AACTATGAAGGCGGTGAC-3' R: 5'- GAATGAAGATGCTGGTGAG-3'
<i>Sox12</i>	XM_021610202.2	F: 5'-ACTCCACGGGTCACATC -3' R: 5'- GGAAGGCGTTCGTATCTTG-3'
<i>Sox13</i>	XM_036950444.1	F: 5'- CTCCTGCCTGTGATTGGT-3' R: 5'- GAGTGCCTTTCAGGTGGTT-3'
<i>Sox14</i>	XM_021604810.2	F: 5'-CGAGCACAGCACATGAAA -3' R: 5'- CAAGGTAAGGCAAAGGGA-3'
<i>Sox17a</i>	XM_021562941.2	F: 5'- GGGGAAGTCGTGGAAGGC-3' R: 5'- GCCGAGGGATTGAGGAGA-3'
<i>Sox17b</i>	XM_021619900.2	F: 5'- AGTTCTGCGGTGCGTCTT-3' R: 5'- CTGCGTTCCTCCTTGCTC -3'

Table S1 to be continued

Gene name	Accession No.	Primer sequence (5' to 3')
<i>Sox18a</i>	XM_036986977.1	F: 5'- TCTCCCAGTCCTTACTCTTACC-3' R: 5'- TGTCTAGTCCAGCGTTATTGT-3'
<i>Sox18b</i>	XM_021567155.2	F: 5'- TCTCCCAGTCTGTACTCTAACC-3' R: 5'-TCGGACCTAAGGAACCAT -3'
<i>Sox19a</i>	XM_021618947.2	F: 5'-TCCAAACGGCTGGGTGTC -3' R: 5'- GGCGGCTAGAGTATTGTTCTTC-3'
<i>Sox19b</i>	XM_021614680.2	F: 5'- GGACAACCAGATGGCGAAGT-3' R: 5'-TGCTGAGTGTAGCCGAGGG -3'
<i>Sox21</i>	XM_021597289.2	F: 5'- AAAAGATTGGGAGCGGAGTG-3' R: 5'- CGTGGTCATGGACGGGTT-3'
<i>Sox30</i>	XM_021624173.2	F: 5'- ACCCTTCTGTGATGTCCTT-3' R: 5'- CCTGTTGCCTGCTGATTT-3'
<i>Sox32</i>	XM_021564366.2	F: 5'- TGATGTCCGAGGCGAAGT-3' R: 5'- TTGGGATGGTCAATGGTG-3'

F = forward; R = reverse

Table S2. All species accession numbers of *Sox*

No.	Species name	Associated gene name	Protein ID
1	<i>Homo sapiens</i>	<i>Sox1</i>	NM_005986.3
		<i>Sox2</i>	NM_003106.4
		<i>Sox3</i>	NM_005634.3
		<i>Sox4</i>	NM_003107.3
		<i>Sox5</i>	NM_006940.6
		<i>Sox6a</i>	NM_001145819.2
		<i>Sox7</i>	NM_031439.4
		<i>Sox8</i>	NM_014587.5
		<i>Sox9</i>	NM_000346.4
		<i>Sox10</i>	NM_006941.4
		<i>Sox11</i>	NM_003108.4
		<i>Sox12</i>	NM_006943.4
		<i>Sox13</i>	NM_005686.3
		<i>Sox14</i>	NM_004189.4
		<i>Sox15</i>	NM_006942.2
		<i>Sox17</i>	NM_022454.4
		<i>Sox18</i>	NM_018419.3
		<i>Sox21</i>	NM_007084.4
		<i>Sox30</i>	NM_178424.2
2	<i>Mus musculus</i>	<i>Sox1</i>	NM_009233.3
		<i>Sox2</i>	NM_011443.4
		<i>Sox3</i>	NM_009237.2
		<i>Sox4</i>	NM_009238.3
		<i>Sox5</i>	NM_011444.3
		<i>Sox6</i>	NM_001277326.1
		<i>Sox7</i>	NM_011446.1
		<i>Sox8</i>	NM_011447.3
		<i>Sox9</i>	NM_011448.4
		<i>Sox10</i>	NM_011437.1
		<i>Sox11</i>	NM_009234.6
		<i>Sox12</i>	NM_011438.2
		<i>Sox13</i>	NM_011439.2
		<i>Sox14</i>	NM_011440.1
		<i>Sox15</i>	NM_009235.2
		<i>Sox17</i>	NM_001289464.1
		<i>Sox18</i>	NM_009236.2
		<i>Sox21</i>	NM_177753.3
		<i>Sox30</i>	NM_173384.2
3	<i>Danio rerio</i>	<i>Sox1a</i>	NM_001002483.2
		<i>Sox1b</i>	NM_001037662.1
		<i>Sox2</i>	NM_213118.1
		<i>Sox3</i>	NM_001001811.2
		<i>Sox4a</i>	NM_213122.2
		<i>Sox4b</i>	NM_200901.1

Table S2 to be continued

No.	Species name	Associated gene name	Protein ID
3	<i>Danio rerio</i>	<i>Sox5</i>	NM_001033585.1
		<i>Sox6</i>	NM_001123009.1
		<i>Sox7</i>	NM_001080750.2
		<i>Sox8a</i>	NM_001284432.1
		<i>Sox8b</i>	NM_001025465.1
		<i>Sox9a</i>	NM_131643.1
		<i>Sox9b</i>	NM_131644.1
		<i>Sox10</i>	NM_131875.1
		<i>Sox11a</i>	NM_131336.1
		<i>Sox11b</i>	NM_131337.1
		<i>Sox12</i>	NM_001030278.1
		<i>Sox13</i>	NM_001365489.1
		<i>Sox14</i>	NM_001037680.1
		<i>Sox17</i>	NM_131287.2
		<i>Sox18</i>	XM_017353772.2
		<i>Sox19a</i>	NM_130908.2
		<i>Sox19b</i>	NM_131702.1
		<i>Sox21a</i>	NM_131286.1
		<i>Sox21b</i>	NM_001009888.2
5	<i>Salmo salar</i>	<i>Sox32</i>	NM_131851.1
		<i>Sox1a</i>	XM_014164686.1
		<i>Sox1b</i>	XM_014152052.1
		<i>Sox2</i>	XM_014169545.1
		<i>Sox3</i>	XM_014212260.1
		<i>Sox4a</i>	XM_014140499.1
		<i>Sox4b</i>	NM_001173644.1
		<i>Sox5</i>	XM_014153070.1
		<i>Sox6a</i>	XM_014175992.1
		<i>Sox6b</i>	XM_014170104.1
		<i>Sox7</i>	XM_014143648.1
		<i>Sox8a</i>	XM_014158419.1
		<i>Sox8b</i>	XM_014179177.1
		<i>Sox9a</i>	XM_014202609.1
		<i>Sox9b</i>	XM_014158399.1
		<i>Sox10b</i>	XM_014179405.1
		<i>Sox10a</i>	XM_014130685.1
		<i>Sox11a</i>	XP_014065663.1
		<i>Sox11b</i>	NM_001173797.1
		<i>Sox12</i>	XM_014167383.1
		<i>Sox13</i>	XM_014166952.1
		<i>Sox14</i>	XM_014189919.1
		<i>Sox17a</i>	XM_014180804.1
		<i>Sox17b</i>	XM_014157844.1
		<i>Sox18a</i>	XM_014147500.1
		<i>Sox18b</i>	XM_014134283.1

Table S2 to be continued

No.	Species name	Associated gene name	Protein ID
5	<i>Salmo salar</i>	<i>Sox19a</i>	XM_014195877.1
		<i>Sox19b</i>	XM_014156344.1
		<i>Sox21</i>	XM_014173390.1
		<i>Sox30</i>	XM_014136757.1
		<i>Sox32</i>	XM_014180620.1
6	<i>Gallus gallus</i>	<i>Sox1</i>	NM_204333.1
		<i>Sox2</i>	NM_205188.3
		<i>Sox3</i>	NM_204195.2
		<i>Sox4</i>	NM_204484.2
		<i>Sox5</i>	NM_001004385.3
		<i>Sox6</i>	NM_001318451.1
		<i>Sox7</i>	XM_001234627.6
		<i>Sox8</i>	NM_204731.2
		<i>Sox9</i>	NM_204281.2
		<i>Sox10</i>	NM_204792.2
		<i>Sox11</i>	NM_001396047.1
		<i>Sox12</i>	XM_015296469.3
		<i>Sox13</i>	XM_015299128.3
		<i>Sox14</i>	NM_204761.1
		<i>Sox17</i>	NM_001039326.2
		<i>Sox18</i>	NM_204309.1
		<i>Sox21</i>	NP_001383603.1
		<i>Sox30</i>	XM_414564.7