

Table 2. Distance (Dis) and divergence time (DT) estimates of the human MSY paralogs.

CDY																
Dis/DT	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	A11	A12	A13	A14	A15	A16
A1	24.94	242.01	243.18	228.76	228.76	239.28	239.28	239.28	24.94	247.07	247.07	247.03	247.03	251.36	251.36	
A2	0.064 ± 0.01	239.14	240.45	226.03	226.03	239.28	239.28	239.28	248.63	248.63	248.63	248.63	251.36	251.36	251.36	
A3	0.621 ± 0.02	0.614 ± 0.02	8.96	68.97	68.97	74.43	74.43	74.43	74.43	219.40	219.40	220.97	220.97	229.92	229.92	
A4	0.624 ± 0.02	0.617 ± 0.02	0.023 ± 0.00	66.25	66.25	77.16	77.16	77.16	77.16	217.84	217.84	219.40	219.40	227.20	227.20	
A5	0.587 ± 0.02	0.580 ± 0.02	0.177 ± 0.02	0.170 ± 0.02	0	79.50	79.50	79.50	79.50	212.78	212.78	213.95	213.95	226.03	226.03	
A6	0.587 ± 0.02	0.580 ± 0.02	0.177 ± 0.02	0.170 ± 0.02	0.000 ± 0.00	79.50	79.50	79.50	79.50	212.78	212.78	213.95	213.95	226.03	226.03	
A7	0.614 ± 0.02	0.614 ± 0.02	0.191 ± 0.02	0.198 ± 0.02	0.204 ± 0.02	0.204 ± 0.02	0	0	0	224.47	224.47	226.03	226.03	231.09	231.09	
A8	0.614 ± 0.02	0.614 ± 0.02	0.191 ± 0.02	0.198 ± 0.02	0.204 ± 0.02	0.204 ± 0.02	0.000 ± 0.00	0	0	224.47	224.47	226.03	226.03	231.09	231.09	
A9	0.614 ± 0.02	0.614 ± 0.02	0.191 ± 0.02	0.198 ± 0.02	0.204 ± 0.02	0.204 ± 0.02	0.000 ± 0.00	0.000 ± 0.00	0	224.47	224.47	226.03	226.03	231.09	231.09	
A10	0.064 ± 0.02	0.614 ± 0.02	0.191 ± 0.02	0.198 ± 0.02	0.204 ± 0.02	0.204 ± 0.02	0.000 ± 0.00	0.000 ± 0.00	0	224.47	224.47	226.03	226.03	231.09	231.09	
A11	0.634 ± 0.02	0.638 ± 0.02	0.563 ± 0.02	0.559 ± 0.02	0.546 ± 0.02	0.546 ± 0.02	0.576 ± 0.02	0.576 ± 0.02	0.576 ± 0.00	0.576 ± 0.02	0	1.169	1.169	115.35	115.35	
A12	0.634 ± 0.02	0.638 ± 0.02	0.563 ± 0.02	0.559 ± 0.02	0.546 ± 0.02	0.546 ± 0.02	0.576 ± 0.02	0.576 ± 0.02	0.576 ± 0.02	0.576 ± 0.02	0.000 ± 0.00	1.169	1.169	115.35	115.35	
A13	0.634 ± 0.02	0.638 ± 0.02	0.566 ± 0.02	0.563 ± 0.02	0.549 ± 0.02	0.549 ± 0.02	0.580 ± 0.02	0.580 ± 0.02	0.580 ± 0.02	0.580 ± 0.02	0.003 ± 0.00	0.003 ± 0.00	0	0	115.35	
A14	0.634 ± 0.02	0.638 ± 0.02	0.566 ± 0.02	0.563 ± 0.02	0.549 ± 0.02	0.549 ± 0.02	0.580 ± 0.02	0.580 ± 0.02	0.580 ± 0.02	0.580 ± 0.02	0.003 ± 0.00	0.003 ± 0.00	0.000 ± 0.00	0	115.35	
A15	0.645 ± 0.02	0.645 ± 0.02	0.590 ± 0.02	0.583 ± 0.02	0.580 ± 0.02	0.580 ± 0.02	0.593 ± 0.02	0.593 ± 0.02	0.593 ± 0.02	0.593 ± 0.02	0.296 ± 0.02	0.296 ± 0.02	0.000 ± 0.02	0.296 ± 0.02	0	
A16	0.645 ± 0.02	0.645 ± 0.02	0.590 ± 0.02	0.583 ± 0.02	0.580 ± 0.02	0.580 ± 0.02	0.593 ± 0.02	0.593 ± 0.02	0.593 ± 0.02	0.593 ± 0.02	0.296 ± 0.02	0.296 ± 0.02	0.296 ± 0.02	0		
XKRY																
Dis/DT	A1	A2	A3	A4	A5	A6	A7	A8	A9							
A1	0	40.33	40.33	40	40	40	41.69	41.69								
A2	0.000 ± 0.00	40.33	40.33	40	40	40	41.69	41.69								
A3	0.119 ± 0.01	0.119 ± 0.01	0	40.67	40.67	40.67	40	40								
A4	0.119 ± 0.01	0.119 ± 0.01	0.000 ± 0.00	40.67	40.67	40.67	40	40								
A5	0.118 ± 0.00	0.118 ± 0.00	0.120 ± 0.01	0.120 ± 0.01	0	0	42.03	42.03								
A6	0.118 ± 0.00	0.118 ± 0.00	0.120 ± 0.01	0.120 ± 0.01	0.000 ± 0.00	0	42.03	42.03								
A7	0.118 ± 0.00	0.118 ± 0.00	0.120 ± 0.01	0.120 ± 0.01	0.000 ± 0.00	0.000 ± 0.00	42.03	42.03								
A8	0.123 ± 0.01	0.123 ± 0.01	0.118 ± 0.00	0.118 ± 0.00	0.124 ± 0.01	0.124 ± 0.01	0.124 ± 0.01	0.124 ± 0.01	0.00 ± 0.00							
A9	0.123 ± 0.01	0.123 ± 0.01	0.118 ± 0.00	0.118 ± 0.00	0.124 ± 0.01	0.124 ± 0.01	0.124 ± 0.01	0.124 ± 0.01	0.00 ± 0.00							
PRY																
Dis/DT	A1	A2	A3	A4	A5	A6										
A1	33.79	0	33.79	33.10	35.17											
A2	0.098 ± 0.01	33.79	0	0.344	21.03											
A3	0.000 ± 0.00	0.098 ± 0.01	33.79	33.10	35.17											
A4	0.098 ± 0.01	0.000 ± 0.00	0.098 ± 0.01	0.344	21.03											
A5	0.096 ± 0.01	0.001 ± 0.00	0.096 ± 0.01	0.001 ± 0.00	20.344											
A6	0.102 ± 0.01	0.061 ± 0.01	0.102 ± 0.01	0.061 ± 0.01	0.059 ± 0.01											

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Table 2. Continued.

TSPY						
Dis/DT	A1	A2	A3	A4	A5	A6
A1		2.32	26.51	30.23	27.67	23.25
A2	0.010 ± 0.00		26.97	30.46	27.90	25.58
A3	0.114 ± 0.01	0.116 ± 0.01		25.58	22.55	24.65
A4	0.130 ± 0.01	0.131 ± 0.01	0.110 ± 0.01		28.37	30.93
A5	0.119 ± 0.01	0.120 ± 0.01	0.097 ± 0.00	0.122 ± 0.01		29.30
A6	0.100 ± 0.01	0.110 ± 0.01	0.106 ± 0.01	0.133 ± 0.01	0.126 ± 0.01	

*BPY2						
Dis/DT	A1	A2	A3	A4		
A1		0	0.331	161.58		
A2	0.000 ± 0.00		0.331	161.58		
A3	0.001 ± 0.01	0.001 ± 0.00		161.92		
A4	0.488 ± 0.01	0.488 ± 0.01	0.489 ± 0.01			

*DAZ						
Dis/DT	A1	A2	A3			
A1		0.165	0			
A2	0.0005 ± 0.00		0.165			
A3	0.000 ± 0.00	0.0005 ± 0.00				

VCY						
Dis/DT	A1	A2				
A1		0				
A2	0.000					

ζ VCX						
Dis/DT	S	R	Q			
S		1.92	3.84			
R	0.005 ± 0.00		5.76			
Q	0.010 ± 0.00	0.015 ± 0.00				

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Table 2. Continued.

ζ RBMX									
Dis/DT	A1	A2							
A1		263.88							
A2		0.380 ± 0.01							
HSFY									
Dis/DT	Y1	Y2	A	B	C	D	E	F	G
Y1	0	41.81	41.81	69.54	69.54	123.64			
Y2	0.000 ± 0.00	41.81	41.81	69.54	69.54	123.64			
A	0.092 ± 0.00	0.092 ± 0.00	0	31.82	31.82	124.55			
B	0.092 ± 0.00	0.092 ± 0.00	0.000 ± 0.00	31.82	31.82	124.55			
C	0.153 ± 0.00	0.153 ± 0.00	0.070 ± 0.01	0.070 ± 0.01	0	153.18			
D	0.153 ± 0.00	0.153 ± 0.00	0.070 ± 0.01	0.070 ± 0.01	0.000 ± 0.00	153.18			
E	0.272 ± 0.00	0.272 ± 0.00	0.274 ± 0.01	0.274 ± 0.01	0.337 ± 0.02	0.337 ± 0.02			
ζ HSFX									
Dis/DT	A1	A2							
A1	4.16								
A2	0.006 ± 0.00								
RBMY									
Dis/DT	A	B	C	D	E	F	G	H	I
A	0	46.83	0	46.83	14.78	219.37	191.90	46.83	46.83
B	0.000 ± 0.00	46.83	0	46.83	15.03	219.37	191.90	46.83	46.83
C	0.133 ± 0.01	0.133 ± 0.01	46.83	0	44.37	216.90	194.37	0	0
D	0.000 ± 0.00	0.000 ± 0.00	0.133 ± 0.01	46.83	14.79	219.79	219.37	191.90	46.83
E	0.133 ± 0.01	0.133 ± 0.00	0.000 ± 0.00	0.133 ± 0.01	44.34	216.90	194.37	0	0
F	0.042 ± 0.01	0.042 ± 0.01	0.126 ± 0.00	0.040 ± 0.01	0.126 ± 0.01	216.90	196.48	44.37	44.37
G	0.623 ± 0.02	0.623 ± 0.02	0.616 ± 0.02	0.623 ± 0.02	0.616 ± 0.02	0.616 ± 0.020	221.13	216.90	216.90
H	0.545 ± 0.02	0.545 ± 0.02	0.552 ± 0.02	0.545 ± 0.02	0.552 ± 0.02	0.558 ± 0.020	0.628 ± 0.02	194.37	194.37
I	0.133 ± 0.01	0.133 ± 0.01	0.000 ± 0.00	0.133 ± 0.01	0.000 ± 0.00	0.126 ± 0.010	0.616 ± 0.02	0.552 ± 0.02	0
J	0.133 ± 0.01	0.133 ± 0.01	0.000 ± 0.00	0.133 ± 0.01	0.000 ± 0.00	0.126 ± 0.014	0.616 ± 0.02	0.552 ± 0.02	0.00 ± 0.00
K	0.133 ± 0.01	0.133 ± 0.01	0.000 ± 0.00	0.133 ± 0.01	0.000 ± 0.00	0.126 ± 0.010	0.616 ± 0.02	0.552 ± 0.02	0.00 ± 0.00

Blue bold: functional copies; *: used average rate to estimate DT as no available orthologs found; ζ : Nachman et al. (2000) rate was used to estimate DT.