

Supplementary table 1:**(a) Primers targeting regions with bivalent H3K4me3 and H3K27me3 marks in cercaria, and monovalent H3K4me3 marks in adults**

<i>Name</i>	<i>Forward sequence</i>	<i>Reverse sequence</i>
sm.Chr_1:47971550,47972100	gcacgtaaaccaccagcccca	caagcgaaaatccacgcgcca
sm.SC_0034:2246640,2247240	gctcgcggagagtaaaccgca	acgccgcctgaagatcaaggg
sm.SC_0071:1183830,1184320	tgaccagtgtggaaatgacctgtgt	agtgaccactcgataggcacgca
sm.Chr_1:8165260,8166110	gacctgggtgactgggcaa	tggacgaaagtctcgttctgatctct
sm.Chr_2:21540210,21540530	tgctttgtgtgattccaaagccatt	agatcacagcccagccttct
sm.SC_0225:87490,88050	tgccagcaaaatccatgtcgc	tgtgtgcttgtgtccacagga
sm.Chr_2:26997540,26998000	tcgtctcgcaatttactttgagcca	caatgactgtgtgcggaatatctggt
sm.Chr_3:12856600,12856890	tcctccacccccacgtacgttat	ccggtttgagttgccatacccca
sm.Chr_1:40471080,40471790	tggtttagcttacgtgcgagagttc	acgcgcttgtgagtgtgactgt
sm.Chr_W:44511380,44511690	tgaggcgagataggacacattcatca	agatggtcattaggaacagccgaact

(b) Primers targeting regions with H3K4me3 differences between cercaria and adults

<i>Name</i>	<i>Forward sequence</i>	<i>Reverse sequence</i>
XLOC_002337	ccgtcacggccaataagggcg	gctcccatatgatgctcgattggct
XLOC_004599	tgagcgagagtgatgctcttttcg	acagaagctgacgccctga
XLOC_004718	aagtggacgagaccggccca	aggttgcgaaaagccgacgaca
XLOC_010397	tgggtggtggtttgcttggga	cgccccaaaactcgcaagcc
XLOC_004811	gcctgacgtagcgactgaaca	tccggacaggttggggtgtct
XLOC_011635	agaaccactgagggttatggtgtgt	ttcgtcctccagcccaca
XLOC_001136	ggcgggcagaatcagggtcg	gggaactccggagaccaca
XLOC_006515	tccaccacttaccgacct	acgtcagctgctgactacca
XLOC_006717	gctactcaacatatcctgatctcccgt	gattgagctctattttgaggaagccga
XLOC_001871	ccgatcgtgcgcttcgcat	agccttgatgccagctttccga