

Additional file 4: Primers used in this study

Primers used for sex identification of cercariae

Target	Name	Forward (5'-3')	Reverse (5'-3')	Amplicon length (bp)
Rhodopsin	Smp_scaff001984.F Smp_scaff001984.R	GACGGCCACACTAAAG	AGTAAAATGGTCACTGCTAT	191
SmWSPP2	Smp_scaff002739.F Smp_scaff002739.R	TGTTTCGAATTTACACTT	CATTCACAGTTTGGCGAACA	391

Primers used for expression analysis by qPCR

Target	Name	Forward (5'-3')	Reverse (5'-3')	Amplicon length (bp)
α-tubuline	aTub2.F aTub2.R	TAGCGCACCATCGAAGCGCA	GCTTTCATGGTTGACAACGAGGCCAT	65
SmPoMuc 3.1(r1r2)	URG/B.F SmPoMuc3 E2/E3.R	CGAACCAACAGGTGACCTCGC	CTGGAAGTGTGGTTCGCTC	113
MSPP tot	MSPPtot.F MSPPtot.R	GAATTGGAATCGAAGGCG	TGTTTCATCTTTGGGTAGTGT	182
SmPoMuc 1	smpomuc1 .E8/9.F smpomuc1 .E12.R	CGAAAGTGCTTACATCGCTG	CGAATAGGCTTCTTTATGTTG	190
SmPoMuc 2	smpomuc2 .E4.F smpomuc2 .E8.R	CCAGATCCACAACAGCACC	ACTTTCGACGTCATCAAGAAG	240
GST	GST.B.F GST.B.R	CAAAGGCCTTGTACAACCAAC TCGT	CGTTCGCCACACATCGCCG	97
GAPDH	GAPDH.F GAPDH.R	TGGCCGTGGAGCGATGCAAA	CGTCTGGTGTGGGACGCGG	122
R564 W5	R=564.F R=564.R	ACCGCGTCTCCCCTCTTCAGT	AGGGAGAGCGCACACCATGA	137
R879 W4	R=879.F R=879.R	CGGTCATGGAGGCGTGGTCA	CTCGTCGTACCATGACAATCAGCA	120

smPDI	SmPDI.F SmPDI.R	GGGATTTATCAAGGATACGGACT C	CACCAAGGAGCATACAGTTTGAC	
smProt1	smProt1.F smProt1.R	TGGCTATCGTAAATAAAGAAGGA A	TCAGCAATAGACCAATCACATTT	72
cox 2	Cox2.F Cox2.R	AGATGGATGCGGTTCCAGGTCTG	AGCATGACCCACACCGCATAAC	104
Smp 152710.1	Smp_1527 10.1A.F Smp_1527 10.1A.R	ACAGCTCTAGTTGTCGACCAA ACATC	ACGCGGTCAACGTAAGGGCA	132
Smp 054160	Smp_0541 60A.F Smp_0541 60A.R	CGGACGCGGACGTGCTGAAT	CAGGCAATCGTCCGCCTGGA	114
Smp 158110.1	Smp_1581 10.1A.F Smp_1581 10.1A.R	GCAAAGCTGGTGGTTTGGGGC	TGCATGACCTTCCTGTTCGTCAAG	90
Spo/AF10 9180	Spo4.F Spo4.R	TGTGTCGTAGGTGCTATG	TGCCTAAATCTTCCTCCG	204
Ef1a	Ef1a2.F Ef1a2.R	AAACTGAAGGCTGAACGCGA ACG	AGCCGCAACAATCAGCATTGCAC	158

Primers used for ChIP analysis by qPCR

Target	Name	Forward (5'-3')	Reverse (5'-3')	Amplicon length (bp)
α-tubuline	ATub.F ATub.R	AGCAGTTAAGCGTTGCA GAAATCA	TGACGAGGGTCACATTTACCAT	65
SmPoMuc 3.1(r1r2)	SmPoMuc 3.1(r1r2)	ATGATTTTACGAGAGGTT CAGT	GGTGCACTATTCAGCCTAGTCA	101
Metallopeptidase	Smp171100.F Smp171100.R	CCTGGAATGGAGAGCTC GTATGACA	GGAGTGTGGATTGAACGCGTCG	115

Primers used for PCR amplification and specific sequencing around SNPs

Target	Name	Forward (5'-3')	Reverse (5'-3')	Amplicon length (bp)
SmPoMuc 3.1(r1r2)	exon2.F exon1.R	TTCTTAGCACTACCCAA AGATGAAC	AGAGAATAATTTTCTTGTTTCATTC TTC	9000
	R1R2-SNP1.F R1R2-SNP1.R	CACGTGTTGCAAATAA CCG	GAAATCCCGGAAGCACTGTA	204

	R1R2-SNP2.F R1R2-SNP2.R	CCGCAGACGAGTCCAA TAGT	AGCAACCGATGATTTGCATT	115
	R1R2-SNP3.F R1R2-SNP3.R	TTCCAAAACGTTGGAC CAT	CGATTGTAAATTTGGAAACGAT	170
	R1R2-SNP4-5.F R1R2-SNP4-5.R	CATGAACAGGGAAATC ACGA	AAAACCATGTTGTTCCGAGG	127
Metallopep tidase Smp_17110 0	Smp171100.F Smp171100.R	CCTGGAATGGAGAGCT CGTATGACA	GGAGTGTGGATTGAACGCGTCG	115