

S1 Table. Oligonucleotides used in this study.

Experiment	Oligonucleotide	Sequence 5' → 3'		
RT PCR	<i>SERA4_for</i>	CGAAGTAAGAAACAAAGGTTTCAG		
	<i>SERA4_rev</i>	GGTTGCCAAACAATATCCAGGAGAAGTG		
	<i>TRAP_for</i>	CCCGGATCCATGAAGCTCTTAGGAAATAG		
	<i>TRAP_rev</i>	GTGTGGATCCTTCCTGACAAACTTTAGAAAG		
	<i>GAPDH_for</i>	ATGGCAATAACAAAAGTCGGAATTAATGG		
	<i>GAPDH_rev</i>	TGTGGATAGCCAAATCTAAAAGACGG		
	<i>MSP1_for</i>	CTGGTTTGGTAGGAGAAGGCCAATC		
	<i>MSP1_rev</i>	AGCTACAGAATACACCATCATAAT		
qPCR	<i>Pb18S_for</i>	AAGCATTAAATAAAGCGAATACATCCTTAC		
	<i>Pb18S_rev</i>	GGAGATTGGTTTTGACGTTTATGTG		
	mHPRT for	TGCTCGAGATGTGATGAAGG		
	mHPRT rev	TCCCCTGTTGACTGGTCATT		
	<i>SERA3_for</i>	GTTGATGTTTTAGGTCCAGATAATTGTG		
	<i>SERA3_rev</i>	GTGGTAAAAATTTGAAGTGGTTGTGG		
SERA4 targeting vectors	mCh-SERA4for	ATAAGAAT <u>GCGGCCG</u> CACGAGATTGACAATGAAAATGAAATAA TGG		
	mCh-SERA4rev	TGCTCTAGATATGCTGCAAAGAAACAATCTTCACC		
	SERA4rep1for	<u>GGGGTACC</u> CACAATTGAAGAGGAATGACGAAAAAGGA		
	SERA4rep2rev	GCCCAAGCTTCATTGGGTGGTTTTGAGGTTTGCCT		
	SERA4rep3for	CGCGGATCCGTACGTGGATAGGAACTTTTAAAGGTA		
	SERA4rep4rev	TCCC <u>GCGGCC</u> CAACCCAATGATAAGTACAGTCATGCA		
Tests for selected parasites	<i>Sera4tag_for</i>	ATATGAAAAGCTTAGAAACCCAGC		
	<i>Sera4tag_rev</i>	TACCTTTAAAAGTTTCCTATCCACG		
	<i>Mcherry_rev</i>	GATCCTTACTTGTACAGC		
	T7	GTAATACGACTCACTATAGGGC		
	<i>Sera4test_for</i>	ACATTTAGCGCATGTTGAATGCTTATACAGC		
	<i>DHFR_rev</i>	CGCATTATATGAGTTCATTTTACACAATCC		
	<i>Sera4test_rev</i>	GGATCCATACCTTGATTTATCAGATTGAT		
	<i>DHFR_for</i>	CCCACGACGACGAATCCAGATGG		
PbSERA-promoter-driven GFP expression	<i>SERA4-5 for</i>	TCCC <u>GCGGTGG</u> GAACGCTGTAAAAATCA		
	<i>SERA4-5 rev</i>	CATGCCATGGTTTGTACAATAATTTAATCTTGAAACATTTTAC TTCA		
	<i>SERA5-5 for</i>	CGTCTAGACGGCTTGTAGTAATTTATAACT		
	<i>SERA5-5 rev</i>	TATCCATGGCTTCCGTTATTTTAAAAGTTTGTC		
Recombi-nant protein expression	<i>SERA4-M-for</i>	TGTGGATCCTTCACAGCAAATGCAAAGAA	protein	tag
	<i>SERA4-M-rev</i>	TGTCTCGAGCATGAGCATCTAATGTGCCACT	Phe ²¹⁶ -His ³⁶⁵	GST
	<i>SERA4-N-for</i>	TTGAATTCCACGAAATTAATACGCAAACCT	His ²⁰ -Asn ¹⁸⁸	GST
	<i>SERA4-N-rev</i>	GAATGCGGCCGCTCATTAGTGTGTGTTTCCCATT		
	<i>SERA1-M-for</i>	TTCGGATCCTATTGCAATGATGAATATTGTGACAG	Tyr ⁵⁸⁶ -Tyr ⁸⁶⁹	MBP
	<i>SERA1-M-rev</i>	AACTGCAGTCAGTAAAAATCAGGAGATATTTTGA		
	<i>SERA2-M-for</i>	TGAATTCAAACATGTAGAACAATGGGTTGC	Lys ⁵⁴⁶ -Pro ⁷¹⁴	GST
	<i>SERA2-M-rev</i>	TGTGGCGGCCGCTATGGATAATTGGATTGAGTTGG		
	<i>SERA3-M-for</i>	CGGGATCCAAAGTAACTGCTCAAAGTGATGAAGA	Trp ⁶²⁰ -Ser ⁸⁷⁵	MBP
	<i>SERA3-M-rev</i>	AACTGCAGAATTGAATCACTATCTGGCTCCAT		

Restriction sites are underlined. For recombinant proteins production, the amino acid position of the respective *PbSERA* proteins and the fusion tag for subsequent purification (MBP or GST) are indicated.