

S5 Table. PCR primers used in this study.

Primer	Sequence	RE*	Application
<i>MrSph</i>			
KO UF	AGCTTGATATCGAATTCACGACTGACATCTTTAGCT	EcoR I	Gene deletion
KO UR	ATCATCTTCTGTGCGACCATCTACGTGACGGACGAG		
KO DF	GTCACCGAGATCTGATGAGTTGACAATGGCGACGAAC	Sac I	Gene rescue
KO DR	GGAACAAAAGCTGGAGCTCCAGGAATAGGTAGTAGTAC		
TF	TCGTCCGTCACGTAGATG		PCR verification
TR	GTTTCGTCGCCATCGTCAAC		
Sph-RE.F	GAGATCTGATGAACTAGTCGTCGTTTGGCAGCCTGCAG		Gene rescue
Sph-RE.R	GAACAAAAGCTGGAGCTCTCAACTTTCCGAGCACTC		
RT-F	TCTTTGAGCAGTCGCATC		RT-PCR
RT-R	GTTAGCTCGGTCCACAC		
<i>MrAgd</i>			
KO UF	CAGCCCGGGGGATCCGACCAGACGAAATCTACAG	BamH I	Gene deletion
KO UR	CAATATCATCTTCTGTGCGACGATCCTACCTGGTCTCAGTC		
KO DF	CACCGAGATCTGATGACATATGCAACATTGGAGATG	Spe I	PCR verification
KO DR	CCGCTCTAGAACTAGTGTGAAGCTTGACAAACGAC		
TF	GTAGTAGTAGCAATGCCTC		PCR verification
TR	CTCGACGGCTATGGCATAAC		
Agd-RE.F	GCAGCCCGGGGGATCCCTACAGCTTGACCGGCGT		Gene rescue
Agd-RE.R	GCACGTCGACGGATCCGTTGTGCTTTTGGCTAGTC		
RT-F	CGTCGTCATCTCCAATGT		RT-PCR
RT-R	CACGATGGTGCCAAATTC		
<i>MrEga</i>			
KO UF	CTGCAGCCCGGGGGATCCGTGCCATTATTATCATATGC	BamH I	Gene deletion
KO UR	CAATATCATCTTCTGTGCGACGAAGTAGCAAATGACGCTG		
KO DF	CACCGAGATCTGATGAGACAACCTTTAGCACCGTC	Spe I	PCR verification
KO DR	CGCTCTAGAACTAGTCATCTTCTTCGACGAGATG		
TF	CACGACGTGGCAAATCATC		PCR verification
TR	GTTTGTGGCTTGTTCAG		
Ega-RE.F	GCAGCCCGGGGGATCCTCGGTATTGCTTCCGCAAC		Gene rescue
Ega-RE.R	GCACGTCGACGGATCCTCAGCTAAAGATGTCAGTCG		
RT-F	CCGAACCTCCATCTACAAG		RT-PCR
RT-R	GCGCTGAAGTAGCAAATG		
<i>MrUge</i>			
KO UF	CAGCCCGGGGGATCCGTTGACAATGGCGACGAAC	BamH I	Gene deletion
KO UR	ATCATCTTCTGTGCGACCATCACGCAGGTGCTCAC		
KO DF	CACCGAGATCTGATGACTTGAAGCTGTTGCTGAG	Spe I	PCR verification
KO DR	CGCTCTAGAACTAGTGTGATTGTAGAAACAGAC		
TF	CTTGGATACGAAGTTCCAC		PCR verification
TR	CTCAGCAACAGCTTCAAG		
RT-F	CCTTGTCATCCAGAAT		RT-PCR
RT-R	CATACAACGCTTGAGCTTC		
<i>MrGtb</i>			
KO UF	CTGCAGCCCGGGGGATCCGTGATGTTTGGAGTCGACCAG	BamH I	Gene deletion
KO UR	ATCATCTTCTGTGCGACGACGCCGAAAAGTACGAG		
KO DF	CACCGAGATCTGATGACTTTGAGTTTGGCACCATG	Spe I	Gene rescue
KO DR	GCTCTAGAACTAGTCAGTACTTTTGCAGCGTC		

TF	CTCGTACTTTTTCGGCGTC	PCR
TR	GTCCGTCGACTCAATGTAG	verification
RT-F	CTCATCCTGTTTGGCATTAC	
RT-R	GCCACGACATCAGAGTATAG	RT-PCR
<i>MrGAG</i>		
KOUF	GATAAGCTTGATATCGAATTCCTGCAAGTCGTAAAAGGCAG	
KOUR	GTTGGCACGTCGACGGATCCCTCGACGGCTATGGCATAAC	Gene
KODF	CACGTCGACTAGTTCTAGAGAATGGTATCAACAAGCGAC	deletion
KODR	GGTGGCGGCCGCTCTAGAGTACCGGTCGTATATGATG	
TF	CAAGTAGCTTTGGCGCTTG	PCR
TR	CTAGCGCAGAATTTGGTGAG	verification

*RE, restriction enzyme.