

Table S1. Primers used in Propeptide swapping

1. AMA1.SP.NsiI.F - ACTGATGCATGGGCTCGTGGGCGTACAAG
2. AMA1.M2AP.FM - GCTAGCACGTCGGGGAATACATTCCCTCGAGCTCGTC
3. AMA1.M2AP.RM – GACGAGCTCGAGGAATGTATTCCCCGACGTGCTAGC
4. M2AP.PacI.R - ACTGTTAATTAAGCCTCATCGTCACT
5. MIC3.SP.NsiI.F – ACTGATGCATCGAGGCGGGACGTCCGCG
6. MIC3.M2AP.FM – GTGCAATCCCCCAGCAAGACATTCCCTCGAGCTCGTC
7. MIC3.M2AP.RM – GACGAGCTCGAGGAATGTCTTGCTGGGGGATTGCAC
8. ETMIC5.FM-GTGGAGACACAGTGGACATTCCCTCGAGCTC
9.ETMIC5.RM-GAGCTCGAGGAATGTCCACTGTGTCTCCAC

Table S2. Primers used in designing scrambled M2AP propeptide

1.Scr-Mature M2AP-FM
AACGTTGCACTTGTAACATTCCCTCGAGCTC
2. Scr-Mature M2AP-RM
GAGCTCGAGGAATGTTACAAGTGCAACGTT

Table S3. Primers used in M2AP propeptide 5' deletion series I

1. M2AP.NsiI.F
ACTG ATGCAT AAA CTC GCT GCC GTG
2. M2AP.PacI.R
ACTG TTAATTAA GCC TCA TCG TCA CT
3. M2AP.PP.Δ2.FM
GCA GTT GTC TCT GCA GTT GGA AAT CCG GCG
4. M2AP.PP.Δ2.RM
CGC CGG ATT TCC AAC TGC AGA GAC AAC TGC
5. M2AP.PP.Δ6.FM
GCA GTT GTC TCT GCA GCG GCG CAG CCC AGT
6. M2AP.PP.Δ6.RM
ACT GGG CTG CGC CGC TGC AGA GAC AAC TGC
7. M2AP.PP.Δ10.FM
GCA GTT GTC TCT GCA AGT GTC CTT GTC AAC
8. M2AP.PP.Δ10.RM
GTT GAC AAG GAC ACT TGC AGA GAC AAC TGC
9. M2AP.PP.Δ14.FM
GCA GTT GTC TCT GCA AAC GAA CCG GTG GCC
10. M2AP.PP.Δ14.RM
GGC CAC CGG TTC GTT TGC AGA GAC AAC TGC
11. M2AP.PP.Δ18.FM
GCA GTT GTC TCT GCA GCC CTA GCT CAG CTC
12. M2AP.PP.Δ18.RM
GAG CTG AGC TAG GGC TGC AGA GAC AAC TGC
13. M2AP.PP.Δ22.FM
GCA GTT GTC TCT GCA CTC AGC ACA TTC CTC
14. M2AP.PP.Δ22.RM
GAG GAA TGT GCT GAG TGC AGA GAC AAC TGC
15. M2AP.PP.Δ24.FM
GCA GTT GTC TCT GCA ACA TTC CTC GAG CTC
16. M2AP.PP.Δ24.RM
GAG CTC GAG GAA TGT TGC AGA GAC AAC TGC

Table S4. Primers used in M2AP propeptide 5' deletion series II

1. M2AP.PP.Δ3.FM
GCA GTT GTC TCT GCA GGA AAT CCG GCG GCG
2. M2AP.PP.Δ3.RM
CGC CGC CGG ATT TCC TGC AGA GAC AAC TGC
3. M2AP.PP.Δ4.FM
GCA GTT GTC TCT GCA AAT CCG GCG GCG CAG
4. M2AP.PP.Δ4.RM
CTG CGC CGC CGG ATT TGC AGA GAC AAC TGC
5. M2AP.PP.Δ5.FM
GCA GTT GTC TCT GCA CCG GCG GCG CAG CCC
6. M2AP.PP.Δ5.RM
GGG CTG CGC CGC CGG TGC AGA GAC AAC TGC

Table S5. Primers used in MIC5 propeptide 5' deletion series I

1.	MIC5.D2.F
	GGCTCTGCTGATGCGTCGCATTTACGCTCC
2.	MIC5.D2.R
	GGAGCGTAAATGCGACGCATCAGCAGAGCC
3.	MIC5.D4.F
	GGCTCTGCTGATGCGTTACGCTCCAGACAC
4.	MIC5.D4.R
	GTGTCTGGAGCGTAAACGCATCAGCAGAGCC
5.	MIC5.D6.F
	GGCTCTGCTGATGCGTCCAGACACATGGAA
6.	MIC5.D6.R
	TTCCATGTGTCTGGACGCATCAGCAGAGCC
7.	MIC5.D8.F
	GGCTCTGCTGATGCGCACATGGAAGCCGGA
8.	MIC5.D8.R
	TCCGGCTTCCATGTGCGCATCAGCAGAGCC
9.	MIC5.D10.F
	GGCTCTGCTGATGCGGAAGCCGGAAGACGA
10.	MIC5.D10.R
	TCGTCTTCCGGCTTCCGCATCAGCAGAGCC
11.	MIC5.D12.F
	GGCTCTGCTGATGCGGGAAGACGAACCATG
12.	MIC5.D12.R
	CATGGTTCGTCTTCCCGCATCAGCAGAGCC
13.	MIC5.D14.F
	GGCTCTGCTGATGCGCGAACCATGGATAACC
14.	MIC5.D14.R
	GGTATCCATGGTTCGCGCATCAGCAGAGCC

Table S6. Primers used in MIC5 propeptide 5' deletion series II

1.	VAL -LYS.F
	GCAGTTGTCTCTGCAAGGAAGAAGGGAAAT
2.	VAL-LYS.R
	ATTTCCTTCTTCCTTGCAGAGACAACTGC
7.	MIC 5 Δ 1.F
	GGCTCTGCTGATGCGGCCTCGCATTACGC
8.	MIC 5 Δ 1.R
	GCGTAAATGCGAGGCCGCATCAGCAGAGCC
9.	MIC 5 L84V.F
	GGCTCTGCTGATGCGGTAGCCTCGCATTTA
10.	MIC 5 L84V.R
	TAAATGCGAGGCTACCGCATCAGCAGAGCC
11.	MIC 5 L84A.F
	GGCTCTGCTGATGCGGCAGCCTCGCATTTA
12.	MIC 5 L84A.R
	TAAATGCGAGGCTGCCGCATCAGCAGAGCC
13.	MIC 5 L84K.F
	GGCTCTGCTGATGCGAAAGCCTCGCATTTA
14.	MIC 5 L84K.R
	TAAATGCGAGGCTTTCGCATCAGCAGAGCC
15.	MIC5.D2L.F
	GGCTCTGCTGATGCGCTCCATTTACGCTCCAGA
16.	MIC5.D2L.R
	TCTGGAGCGTAAATGGAGCGCATCAGCAGAGCC

Table S7. Primers used in propeptide domain mutations

1. AMA1-M2AP.LK.F
ATATTCGCATCGGGAAAGAGCTCAAGCACAAGG
2. AMA1-M2AP.LK.R
CCTTGTGCTTGAGCTCTTTCCCGATGCGAATAT
3. MIC3-M2AP.LK.F
ACC CCA GCG GAG GCT AAG CCG ATT CAG AAG TCT
4. MIC3-M2AP.LK.R
AGACTTCTGAATCGGCTTAGCCTCCGCTGGGGT
5. MIC3-M2AP.IK.F
GCG GAG GCT TTG CCG AAG CAG AAG TCT GTG CAG
6. MIC3-M2AP.IK.R
CTGCACAGACTTCTGCTTCGGCAAAGCCTCCGC
7. ETMIC5-M2AP.LK.F
GTTGTCTCTGCATGGAAGGCACCAAACAGACGC
8. ETMIC5-M2AP.LK.R
GCGTCTGTTTGGTGCCTTCCATGCAGAGACAAC