

SUPPLEMENTAL TABLES

Sequences of the Primers Used in Quantitative PCR

Gene	Sequence (5' → 3')
<i>Taglu1a</i>	CGGCGGCTTCTTAAATAGGA (sense) ACATCAAAGGCCATCCCTATC (antisense)
<i>Taglu1b</i>	AGGTGTGCTTTAAGAACTTCGGT (sense) GAACCATCCCATGTTGTAGTCA (antisense)
<i>Taglu1c</i>	CGGAAAGCCAAACCAGAA (sense) CTAGGAGGATGTGGTGACCG (antisense)

Sequences of the Primers for Heterologous Expression of *Taglu1s* and *Scglu* in *E. coli*

Primer	Sequence (5' → 3')
Sense primer	AATCCATGGCAGGCACACCGTCAAAG
Antisense primer	TGATATCTCGAGCCATGCATCCAGCCTTGG (<i>Taglu1a</i> and <i>Taglu1b</i>) AGCTCGAGACATAGCAGAGCACCACCTCT (<i>Taglu1c</i>) TATCTCGAGCCAGGATCCAGCATTGGA (<i>Scglu</i>)

Sequences of the Primers Used in Mutagenic PCR

Mutant	Sequence (5' → 3')
TaGlu1a- and ScGlu-E191A	AACGCGCCGCATACATATTGTTGT (sense) TGTATGTGGCGCGTTAAAGGTGAA (antisense)
TaGlu1a-F198A	TGTTGTGCCTCCTATGGTGAGGGGAT (sense) CCATAGGAGGCACAACAATATGTATGTGG (antisense)
ScGlu-F198A	TGTTGTGCCTCATATGGAGAGGGGAT (sense) CCATATGAGGCACAACAATATGTATGCG (antisense)
TaGlu1a- and ScGlu-Y378A	ATTACCGGGACTGCATGGATTTAC (sense) GTACATGTAAATCCATGCAGTCCC (antisense)
TaGlu1a- and ScGlu-Y378F	GGGACTTTTTGGATTTACATGTAC (sense) GTAAATCCAAAAAGTCCCGGTAAT (antisense)
TaGlu1a-S464F	GACAACTTTGAATGGTTCCTGGGC (sense) GCTGTAGCCCAGGAACCATTCAA (antisense)
ScGlu-G464F	TTCGAGTGGTTCAGCGGCTA (sense) CCGCTGAACCACTCGAAGTT (antisense)
TaGlu1a- and ScGlu-E407A	ATCACTGCGAACGGAATTGCTGA (sense) TTCCGTTTCGAGTGATGAAGATG (antisense)
TaGlu1a- and ScGlu-F471Y	GAGGCCGTATCGTGAGCTGTA (sense) CTCACGATACGGCCTCGTCTA (antisense)
ScGlu-G464S	TGGAGCAGCGGCTACAGCTC (sense) TAGCCGCTGCTCCACTCGAA (antisense)

ScGlu-S465L;	TGGGGCCTCGGCTACAGCTC (sense) TAGCCGAGGCCCACTCGAA (antisense)
ScGlu-G464S/S465L	TGGAGCCTCGGCTACAGCTC (sense) TAGCCGAGGCTCCACTCGAA (antisense)

The Sequences of the Primers for the Expression of Zm-TaGlu1a and -TaGlu1b

Primers	Sequence (5' → 3')
Sense primer	AGACCATGGCAAGAGTAGGCAGCCAAAATGGAGTCCAAATGTTGAG CCCCTCGGAAATCCCACAAAGGGACTGGTTCGACAAGGA
Antisense primer	TGATATCTCGAGCCATGCATCCAGCCTTGG
