

Table S2. Primers used for construction of plasmids for the deletion and complementation of *CST1*.

***Δcst1* plasmid (pRS416)**

TGME49_064660 5' recombination sequence F/R

TTGGGTAAACGCCAGGGTTTTCCAGTCACGACGGTTTAAACATTATGTTGCTTACCCTATA
GCGGGTTTGAATGCAAGGTTTCGTGCTGATCAAAGTATCGACACAAGATGCCACGT

HXGPRT cassette F/R

ACTAGTTTGATCAGCACGA
TAACTAGTCCTCCACCGC

TGME49_064660 3' recombination sequence F/R

TTCTGGCAGGCTACAGTGACACCGCGGTGGAGGACTAGTTAGAGGCGCCGCGCTACAG
GTGAGCGGATAACAATTTACACAGGAAACAGCGCGGCCGCACATAAATCTGCAGAGCCTA

cDNA *CST1* complement plasmid (pSMART-BAC)

UPRT 5' recombination sequence F/R (1.1kb)

CAACTTGTCCACGTGGAATTGTTAACGTGAGCTCATGCTGGAGCTTCG
ATGGTACTCTACTTCGTTAAGCTTTCGGCTCGCTGGGAC

CST1 5' upstream F/R (1.3kb)

TAAACGAAGTAGAGTACCATCATTACAATTCTGGG
TCAGATCTCGGGTTCTTCCAGATCGAACCCGGA

CST1 cDNA F/R (7kb)

AACCCCGAGATCTGAGGCATGAGATGAAGAAAATAGAGGT
GCGGCGCCTCTACTCATGTCCGCAACAACAACAG

CST1 3' UTR (1.1kb)

GAGTAGAGGCGCCGCGCTACAGTTTGTGGAATTTGAT
AGGGCGAAGTTTTTGAAGACTTAGCTGCACCG

UPRT 3' recombination sequence F/R (1.1kb)

TCTTCAAAAACCTTCGCCCTGCTGTCTTGTGTCAGGTACT
CAAGTCACGTGAATTGTTAACTGGCGTTCGATCGACCGAAG

Mucin-null cDNA *CST1* complement plasmid (pSMART-BAC)

Muc-null *CST1* 5' half R (6kb with *CST1* cDNA F):

CTTATCGTCGTCATCCTTGTAACTTTCATGTTGCAGTGGGTC

Muc-null *CST1* 3' half F (300b with *CST1* cDNA R):

GATTACAAGGATGACGACGATAAGCTCTTCGACTGGAGCAGT

***Δcst1* construct genomic integration PCR primers F/R (1.3kb if integrated)**

ACTGTATAGACGCTGGTTGTA
CCCGAGAAAAAGAAACGAACAGA

Primers for the detection of mutant *CST1* (gDNA: 1824 bp, cDNA: 1546 bp, cDNA Δ *muc*: 781 bp)

CTTGATAAAACCTGCAAAAGCTGTG
GTCGATCTTAAAAGGCACCAAAGA