

Supplementary data 1: Nucleotide sequence alignment of the sense strand of the native bovine prochymosin and the synthesized gene with optimized codons for proper expression in tobacco. The sequences marked with an asterisk are similar in two sequences.

Native	ATGGCTGAGATCACCAGGATCCCTCTGTACAAAGGCAAGTCTCTGAGGAAGGCGCTGAAG	Native	GACAGGAATGGCCAGGAGAGCATGCTCACGCTGGGGCCATCAACCCGTCCTACTACACA
Codon-optimized	ATGGCTGAAATTAAGAAATTCCTTTATATAAAGGAAAATCTTAAAGAAAAGCTTAAAAA	Codon-optimized	GATAGAAATGGACAAGAATCTATGTTAACTCTTGGAGCTATTAATCCTTCTTATTACT
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Native	GAGCATGGGCTTCTGGAGGACTTCCTGCAGAAACAGCAGTATGGCATCAGCAGCAAGTAC	Native	GGGTCCCTGCAGTGGTGGCCGTCAGCAGTGCAGCAGTACTGGCAGTTCCTGTGGACAGT
Codon-optimized	GAACATGGATTATTAGAAGATTTTACAAAAACAACAATATGGAATTTCTTCTAATAT	Codon-optimized	GGATCTTACATTGGGTACCTGTAAGTGTACAACAATATTGGCAATTTACTGTAGATTCT
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Native	TCCGGCTTCGGGAGGTGGCCAGCGTGCCCTGACCAACTACCTGGATAGTCACTTTT	Native	GTCACCATCAGCGGTGTGGTGTGGCCTGTGAGGGTGGTGTGAGCCATCTTGGACAGC
Codon-optimized	TCTGGATTTGGAGAAGTAGCTTCTGTACCTTAACTAATTATTTAGATTCTCAATATTTT	Codon-optimized	GTAACATTTCTGGAGTAGTAGCTTGTGAAGTGGATGTCAAGCTATTTTAGATACT
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Native	GGGAAGATCTACCTCGGACCCCGCCAGGAGTTCACCGTGTGTTGACTGGCTCC	Native	GGCACCTCAAGCTGGTGGCCAGCAGCGACATCTCAACATCCAGCAGGCCATTGGA
Codon-optimized	GGAAAAATTTATAGAACTCCTCTCAAGAAATTTACTGTATTATTTGACTGGATCT	Codon-optimized	GGAACTTCTAAATTAGTAGGACTTCTTCTGATATTTAAATATTCAACAGCTATTGGA
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Native	TCTGACTTCTGGGTACCCTCTATCTACTGCAAGAGCAATGCCTGCAAAAACACCAGCGC	Native	GCCACACAGAACCAGTACGGTGTGATTTGACATCGACTGCGACAACCTGAGCTACATGCC
Codon-optimized	TCTGATTTTGGGTACCTTCTATTATTGTAATCTAATGCTGTGAAAAATCATCAAGA	Codon-optimized	GCTACTCAAAATCAATATGGAGAATTTGATATTGATTGTGATAATTTATCTTATATGCC
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Native	TTCGACCCGAGAAAGTGTCCACCTTCCAGAACCTGGGCAAGCCCTGTCTATCCACTAC	Native	ACTGTGGTCTTTGAGATCAATGGCAAAATGTACCCACTGACCCCTCCGCTATACCAGC
Codon-optimized	TTTGATCTAGAAAATCTTCTACTTTTCAAAATTTAGGAAAACCTTATCTATTCTATT	Codon-optimized	ACTGTAGTATTTGAAATTAATGGAAAAATGTATCTTAACTCCTTCTGCTTACTTCT
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Native	GGGACAGGCAGCATGCAGGCATCCTAGGCTATGACACCGTCACTGTCTCAACATTGTG	Native	CAAGACCAGGGCTTCTGTACCAGTGGCTTCCAGAGTGAAAATCATTCCCAGAAATGGATC
Codon-optimized	GGAACTGGATCTATGCAAGGAATTTAGGATATGATACTGTAAGTGTATCTAATATTGTA	Codon-optimized	CAAGATCAAGGATTTTGTACTTCTGGATTTCAATCTGAAAATCATTCTCAAAAATGGATT
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Native	GACATCCAGCAGACAGTAGGCCCTGAGCACCCAGGAGCCGGGGACGCTTTCACCTATGCC	Native	CTGGGGATGTTTTATCCGAGAGTATTACAGCGTCTTGGACAGGGCCAACAACCTCGTG
Codon-optimized	GATATTTCAAAACTGTAGGATTATCTACTCAAGAACCTGGAGATGATTTACTTATGCT	Codon-optimized	CTTGGTGTGATTTATTAGAGAATATTCTGATTTGATAGAGCTAATAATTTAGTA
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Native	GAATTCGACGGGATCCTGGGGATGGCCTACCCCTCGCTCGCCTCAGAGTACTCGATACCC	Native	GGGCTGGCCAAAGCCATCTGA
Codon-optimized	GAATTTGATGGAATTTAGGAATGGCTTATCCTCTTTAGCTTCTGAATATTCTATTCTC	Codon-optimized	GGATTAGCTAAAGCTATTGTA
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Native	GTGTTTGACAACATGATGAACAGGCACCTGGTGGCCAAAGACCTGTTCTCGGTTTACATG		
Codon-optimized	GTATTTGATAATGATGAATAGACATTTAGTAGCTCAAGATTTATTTCTGTATATATG		
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