

Supporting Information (SI)

Table S1: Primers used for the construction of recombinant CPP-dmCocE vectors. CPP codons are shown in lower case.

CPP-dmCocE Fusion Proteins	Forward Primer	Backward Primer
Tat-N-dmCocE	5'- GAGATATACATATGtacggaag aaagaagagaaggcaagaaggagagga GTGGACGGGAATTACAGTG TTGCC-3'	5'- GAGAATTGCTGCGAGTTG- 3'
LMWP-N-dmCocE	5'- ATACATATGgtatcaagaaggagaa ggagaaggggaggtagaaggagaagggg aGTGGACGGGAATTACAGT GTTGCC-3'	
dmCocE-C-Tat	5'- AAGTAACCGGCACCGTCTC CGCCCGGCTGTTCGTGTC-3'	5'- AGCCGGATCCTAtctctcttttgcc ttctctttttccgtatccGTGGTGGT GGTGGTGGTGC-3'
dmCocE-C-LMWP		5'- AGCCGGATCCTAccttctcttcta cctccccttctcttctcttcttgatactccG TGGTGGTGGTGGTGGTGC- 3'

Table S2: Codon usage of the expression of Tat and LMWP in the *Escherichia coli* B hosts. Codon frequencies are taken from the Codon Usage Database (<http://www.kazusa.or.jp/codon/>) and expressed as codons used per 1,000 codons encountered. The six rarest codons (agg (R), aga (R), cga (R), ccc (P), cta (L), and tgt (C)), which have the frequency less than 5 codons/1,000 codons encountered, are marked in asterisk.

Tat													
Amino acid	Y	G	R	K	K	R	R	Q	R	R	R		
Codon	tac	gga	*aga	aag	aag	*aga	*agg	caa	*aga	*agg	*aga		
Frequency	8.5	8.2	2.4	8.8	8.8	2.4	2.1	13.5	2.4	2.1	2.4		

LMWP														
Amino acid	V	S	R	R	R	R	R	R	G	G	R	R	R	R
Codon	gta	tca	*aga	*agg	*aga	*agg	*aga	*agg	gga	ggt	*aga	*agg	*aga	*agg
Frequency	10.6	6.1	2.4	2.1	2.4	2.1	2.4	2.1	8.2	24.4	2.4	2.1	2.4	2.1