A1. Synthetic protein sequence SP-6His

MKTVVVKPEIIHNVEKKFVHIVKMCVFTWVVNEVPVVIKIVNTNFVHVFFVENTIN
VVVKVVPIVVFVKVTECMTKIVVTPVENHKVFIPNVNIVKEVKIHTVMKEVIPVVV
KMCFFIPVFVHVEVKFVPIMKNKSTVWVVKEKVFVTTFPLEQKLISEEDLNSAVDH
HHHHH-

A2. Synthetic protein (SP-6His) and synthetic gene (SP)

```
EcoRI
gaattcGCCATGAAGACGGTCGTCGTCAAGCCAGAGATCATCCACAACGTCGAGAAGAAGTTCGTCCACATCGTCAAGATGTGCGTCTTCACCTGGGTGG
cttaagCGGTACTTCTGCCAGCAGCAGTTCGGTCTCTAGTAGGTGTTGCAGCTCTTCTTCAAGCAGGTGTAGCAGTTCTACACGCAGAAGTGGACCCACC
        ›M  K  T  V  V  V  K  P  E  I  I  H  N  V  E  K  K  F  V  H  I  V  K  M  C  V  F  T  W  V
TCAACGAGGTGCCAGTCGTGATCAAGATCGTCAACACCAACTTCGTGCACGTCTTCTTCGTCGAGAACACCATCAACGTCGTCGTGAAGGTCGTGCCAAT
AGTTGCTCCACGGTCAGCACTAGTTCTAGCAGTTGTGGTTGAAGCACGTGCAGAAGAAGCAGCTCTTGTGGTAGTTGCAGCAGCACTTCCAGCACGGTTA
›V  N  E  V  P  V  V  I  K  I  V  N  T  N  F  V  H  V  F  F  V  E  N  T  I  N  V  V  V  K  V  V  P  I
CGTCGTCTTCGTCAAGGTGACCGAGTGCATGACCAAGATCGTCGTCACCCCAGTGGAGAACCACAAGGTGTTCATCCCAAACGTCAACATCGTGAAGGAG
GCAGCAGAAGCAGTTCCACTGGCTCACGTACTGGTTCTAGCAGCAGTGGGGTCACCTCTTGGTGTTCCACAAGTAGGGTTTGCAGTTGTAGCACTTCCTC
›  V  V  F  V  K  V  T  E  C  M  T  K  I  V  V  T  P  V  E  N  H  K  V  F  I  P  N  V  N  I  V  K  E
GTCAAGATCCACACCGTGATGAAGGAGGTGATCCCAGTGGTGGTCAAGATGTGCTTCTTCATCCCAGTGTTCGTCCACGTGGAGGTCAAGTTCGTCCCAA
CAGTTCTAGGTGTGGCACTACTTCCTCCACTAGGGTCACCACCAGTTCTACACGAAGAAGTAGGGTCACAAGCAGGTGCACCTCCAGTTCAAGCAGGGTT
›V  K  I  H  T  V  M  K  E  V  I  P  V  V  V  K  M  C  F  F  I  P  V  F  V  H  V  E  V  K  F  V  P
                                                                                  XbaI
TCATGAAGAACAAGTCCACCGTCTGGGTCGTGAAGGAGAAGGTGTTCGTGACCACCTTCCCtctagaACAAAAACTCATCTCAGAAGAGGATCT
AGTACTTCTTGTTCAGGTGGCAGACCCAGCACTTCCTCTTCCACAAGCACTGGTGGAAGGGagatctTGTTTTTGAGTAGAGTCTTCTCCTAGA
›I M  K  N  K  S  T  V  W  V  V  K  E  K  V  F  V  T  T  F  P  L  E  Q  K  L  I  S  E  E  D  L
CGCCGTCGACCATCATCATCATCATCATTGA
GCGGCAGCTGGTAGTAGTAGTAGTAGTAACT
›  A  V  D  H  H  H  H  H  H
```

Additional file 1. The amino acid sequence of the synthetic protein SP-6His.
A1. Organization of the amino acid sequence (SP-6His) and A2. Organization of the nucleotide sequence (SP-6His).