

A dnaZX-like open reading frame downstream from the Bacillus subtilis scRNA gene

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In a B. subtilis 1.5 kb EcoR I DNA-fragment containing the 3'-moiety of the scRNA gene (underlined) (1) an ORF homologous to dnaZX from E. coli (2) was detected, suggesting the ORF to represent the gene for DNA polymerase III. Potential regulatory elements are indicated.

1 GAATTCATGACCGATGTCAGCCGCGGAAAGCAGCATTATGTTAAACCTCTCATATGCCGAGGTTGCCTGGCCGAGTACTGCTTAAGTAAACCTTAGGATGCGAATCGACAG
121 AAGGTGACCGGTAAATCAATCATCAAAATTTTCAGACTACCTTAATATAGGTGAGTTTTTGTATTATATAAAGAGACTTTGGAAATCGAACAAGGTTCAATATATGGAATGATGAA
terminator -38 -10
241 TAACGAGAGAGGGCAACCCGTAAGTTTACCAGCTTTATATCGAATTCAGGCGCTCAGCGCTTGAAGATGTGGTCCGACAGAACACATTACAAAACCGCTCAAAATGCCCTTTTGC
E. coli dnaZX S Y Q V L A R K W R P Q T F A D V V G Q E H V L T A L A N G L S
361 AAAAAAGATTTCTCAGCCTACTGTTTTCCGGGCTAGAAGAACCGGAAALACAGTGCAGCCAAATATTGCTAAGGCTGTCACTGTGTAAACATGCTCTGTGTGATGAGGCATGCA
L G R I N H A Y L F S G T R G V G K T S I A R L L A K G L N C E T G I T A T P C
----- adenine nucleotide binding site -----
481 ACGAATGTCGGCGCTGTAAAGGATAACAACCGGCAATATCCGATGTCATAGAAATTCAGCCGCTTCTAATAAGCGGTTGATGAGGATTCGTAACCTCCGCAATAAGTAAAGTTTG
N E C A A C K G I T N G S I S D V I E I D A A S N N G V D E I R D I R D K V K F
G V C D N C R E I E Q G R F V D L I E I D A A S R T K V E D T R D L L D N V Q Y
601 CCCCATCGGCCCTCACATAAAGGATATATCATAGATGAGGTGCATATGCTTCTATCGGCCCTTTAAATGACTACTAAALAACATTAGAAGCGCCCTGAGCATTGTATTTTCATAT
A P S A V T Y K E V Y I I D E V H M L S I G A F N A L L K T L E S P P S H C I P I
A P A R G R F F V Y L I D E V H M L S R H S F N A L L K T L E E P P E H V K F L
721 TAGCAACACTGAAACCGCACAAAATTCCTTTAAACCATATCTCTAGATGTCAGCGCTTGGACTTTAAAGCAATTAACCTCCCAAGCGATGTAGCCGCGATGAATAAAATTTGATGCTG
L A T T T E P H R I F L T I I S R C Q R F D F K R I T S Q A I V G R H M K I V D A
L A T T D P Q K L P V T I L S R C L Q P H L K A L D V E Q I R H Q L E H I L N E
841 AACAGCTGCAATGGAGGAGGATCGCTGGAATATCATCGGAGTGTGCTGAGAGCGGAGGATGAGGATGCCCTGAGCCCTTCTGTATCAGGCCATATCATCAGCGCCGATATCTCTGAAG
E Q L Q V E E G S L E I I A S A D D G G W E D A L S L L D C A I S F S G D I L K
E H I A H E P R A L Q L L A R A A E G S L R D A L S L T D Q A I A S G D Q V S
961 TCGAAGATGCGCTTTAATTCAGGCTGCTGTTCTCAATATATATCGGAACTGCAAAATCCCTGCATGATAAALACGTTCTGCAAGCCAGTGAACAATTAAATGAAATGCTCTCAGC
V E D A L L I T G A V S Q L V I G K L A K S L N D K H V S D A L E T L E L L Q
T Q A V S A M L G T L D D D Q A L S L V E A M V E A N G E R H V M A L I N E A A A
1081 AAGGAAAGATCCAGCTAAGCTGATAGAAGATGATTTCTATTTACGGGATGCTGCTGTACAAAGACGCCCTTGGCTTAGAGGGAGTCTTGAAGAAATGATGATGATGATGATGATG
Q G K D F A K L I E D N I F Y F R D M L L Y K T A F G L E G V L E K V R V D E T
R G I E M E A L L V E M L G L L H R I A M V Q L S P A A L G . N D H A A I E L R
1201 TCGGGAACTAAGTGAACAATTCGGCTCAGGCCCTATATGAAATGATGATTTGAAACAAGAGCCATCAGGAAATGAAATGCAAAATTCAGCCGCTATCTTTTTCGAAATGCGCCG
F R E L S E Q I P A Q A L Y E M I D I L N K S H Q E N K T N H F R I P F E V A
M R E L A R T I P P T D I Q L Y Y Q T L L I G R K E L P Y A P D R M G V E M T
1321 TTGTGAAGATTCGCAAACTCAGATCAATCTGCTGCTGATCTCCCGAAGTGGATATGCTGATGAAAAAATTCAGCAGCTCGAAACAGGAAGTAGAGCCGCTCAAAAACAGGGCATAA
V V K I C Q T S H Q S A A D L P E V D M L N K K I Q Q L E Q E V E R L K T T G I
L L R A L A F H P R H P L P E F E V P R Q S F A P V A P T A V M T P T Q V P P Q
1441 AAGCAGCTCGGAAAGCCGAAAGAGAGCCGCGCTGTGTCGCAAGGCGGAAATCCAAATACAAAGCCAGTGAAGGCAAAATTC
K A A A E S P K K E A P R V P K G G K S N Y K A P V G R I
P Q S A P Q Q A P T V P L P E T T S Q V L A A R Q Q L Q R

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