

Phage BouleyBill

Gene 15 Tail assembly chaperone

R Q V G E H M V I Q Q L R R T H A G G G G A A L R H P H A G G R P R C H V L S G
M D R * E N T M S F N S Y E E L M Q A V E E R R S D I L T L E V D L G A T Y S Q
T T G R R T P C H S T A T K N S C R R W R S G A P T S S R W R S T S V P R T L R
8618 CACGACAGGTAGGAGAACCCATGTCATCACAGCTACGAAGAACTCATGCAGGGGGGGAGGAGGGGGCTCGACATCTCACGCTGGAGGTGACCTCGGTGCCCCGATCTCAG
.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|
30598 GTGCTGTCATCCTCTGGGTACAGTAAGTGTGATGCTCTTGAGTAAGTGTGCCCCACCTCTCGCCCGAGGGCTGAGGAGTGGGACCTCACTGGAGGTGACCTCGGTGCCCCGATGAGAGTC
V R C T P S C W T M * C S R L V * A P P P P P A A S R C G * A P P R G R H W T S E
C S L Y S F V M D N L L * S S S M C A T S S R R E S M R V S S T S R P A V Y E *
V V P L L V G H * E V A V F F E H L R H L L P A G V D E R Q L D V E T G R V R L

A R G R Q E G A P A G Q G A E A R A C R G S G L P G R Q P G G A R G S C G R D Q A
E H E D A K K E L Q Q A K A L K Q L A G G G Q D F L A D N L A A L E A R V A E T K
S T R T P R R S S S R P R R * S S L P G V R T S W P T T W R R S R L V W P R P S
8738 GAGCACGAGGAGGCCAAGAAGGGAGCTCAGCAGGCCAAGGCGCTGAAGCAGCTTGCGGGGGTCAGGACTCTGGCGACAACTGGGGGCGCTCGAGGCTGTTGGCGAGGACCAAG
.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|
30478 CTGGTGTCTCGCGGTTCTCTGGGTGTCGGGTCGGGACTCTGCGAACGGCCCCCAGTCAGGAGGACCCGCTGTTGGACCGCCGGAGCTCCGAGCACACGGCTCTGGGTC
P A R P R W S P A G A P W P A S A A Q R P D P S G P R C G P P A R P E H M P R S W
S C S S A L F S S W C A L A S F C C S A P P * S K R A S L R A A S S A R T A S V L
L V L V G L L E L L G L R Q L L K G P T L V E Q G V V Q R R E L S T H G L G L

* V P Q R V G P V Q P S Q A G G V G H A G Q D Q R P D A H R P V R E G S A E D V
P E S R N V W V R F S R L K L G E W A M L V K T S G L T P I D Q Y E K V L P K T
L S P A T C G S G S A V S S W G S G P C W S R P A A * R P S T S T R R F C R R R
8858 CCTGAGTCGGCAACGTGTGGGTCGGGTCAGCGCTCTCAAGCTGGGAGTGGCCATGCTGGCAAGACCAGCGGCCATGACAGTAGAGAAGGGITCTGCGCAAGAOG
.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|
30358 GGACTCAGGGCGTTGCACACCCAGGCCAAGTOGGCAGAGGTTGACCCCTCACCGGTAOGACCGAGTCTGGTCGGGACTGCGGGTAGCTGGTCATGCTCTTCAAGACGGCTCTGC
A Q T G C R T P G T * G D * A P P T P W A P * S W R G S A W R G T R S P E A S S
G S D R L T H T R N L R R L S P S H A M S T L V L P R V G M S W Y S F T R G F V
R L G A V H P D P E A T E L Q P L P G H Q D L G A A Q R G D V L V L L N Q R L R

H R C L R A G P G R R G R R R G H R A A L H R P G A A V Q Q G * Q G Y P A W R H
F I G V Y G Q D P A G G E D G E V I E P L S T D P A L L S S K G D R G I L P G G
S S V S T G R T I R Q A G K T A R S S S R S P P T R R C C P A R V T G V S C L A A
8978 TTCACTGGTGTCTACGGGCAAGGACCCGGCAGCGGGGGAGACGGCAGGTCTCGACGGCTCTCCACCGACCGGCCGCTGCTGACCAAGGGTAGCTGGGTATCTGCGCTGGCGGC
.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|
30238 AAGTAGGCCACAGATGCCGCTCTGGGCGTCCGGGCTCGCGGCTCCAGTAGCTGGCGAGAGGGCTGGCGACGACAGGTGTCCTGGCATAGGACGGACCGCGCG
I * R H R R T A P G P L R R P * R A A R W R G P A A T W C P H C P Y G A Q R
N M P T * P C S G A P P S S P S T M S G S E V S G A S S D L L P S L P I R G P P
E D T D V P L V R C A P F V A L D D L R E G G V R R Q Q G A L T V P T D Q R A A

A S P G C P G V H G L A E L V G G H H H P P Y E I G P R L G V L L D M A L A S G
M L H Q V V Q A F M A N Q N S S G D I T I R P T K S G L V * E F S W T W P W H P
C F T R L S R R S W P G R T R R G T S P S A L R N R A S S R S S L G H G P G I R
9098 ATGCTTCACCAAGGTGTCAGGCGTTCTGGCTGGCAGAACCTCGCTGGGGACATCACCATCGGCCCTACGAAATCGGGCTCGCTAGGAGTCTTGGACATGGCGCTGGCATCG
.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|
30118 TAACGAAGTGGTCCAACAGGTCGGCAAGTACCGGACCGCTTGGACAGGCCCTGTTAGGGTAGGGAGGAGCTTACGAGAACCTGTAACGGGACCGTACGGGACCGTACGG
C A E G P Q G P T * P R A S S T P P C * W G G * S I P G R R P T R K S M A R A D
M S * W T T W A N M A Q C F E D P S M V M R G V F D P R T * S N E Q V H G Q C G
H K V L N D L R E H G P L V R R P V D G D A R R F R A E D L L E R P C P G P M R

R P P L R L L D E G R P D A W Q E V D L E V V S Q W K H M K E V K C P G C G R P
V G P R F A S L T R V G R M P G R R * T S R S S P S G S T * R R S S A P A A V A

Gene 16 (yellow)