

Nucleotide sequence of the VP4 core protein gene (M4 RNA) of US bluetongue virus serotype 10

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The sequence of the double-stranded RNA segment M4 of bluetongue virus serotype 10 (encoding the VP4 protein) was determined from a complete cDNA clone inserted into pBR322. The M4 RNA was deduced to be 2011 base pairs in length and coded for a 654 amino acid protein (75,998 Daltons; net charge + 7.5 at pH 7.0). Unlike the other BTV RNA species the 5' non-coding region is short (1-5).

N P R P H A V L Y V T N E L S H I V K N E F L P I M K L T G D E R L N D L M
100
O T T A A A C A T G C C T G A C C A C C C A G T A C T C T A T O T C A C A A T G A C C T C T C A T A T C O T T A A G A A T G A A T T T T C C A A T A T G A A A C T A A C T G A G A T G A G A T T A A T G A C T T A T
120
L E N G E Y A T D V Y A Y G D V S E K W T I R Q L R G H G F I F I S T E K N V Q L
O O C T G A A A T G O A A A G T C C C A G A C A T T A T C C G T A C C G A C O T T T C A A G T G O G A C A T A O G A C A A T T A C C G O O T C A E I G A T C A T T T T A A A C C C A C A G A A C G T A C A C
140
A D I I E T V D V R V P R V A R S H D N E A F N E G I R B R I R N R K Q F G
T A O C T G A C A T T A A G A C G O T T G A C T C C C G A T T C C C G G A G O T T C C A A G A A C T A G A A A C O C T T T G A A A A T G A G A C C G A G A C C A G A C C O T C O T A T C C C A A G O G A T T G
160
D A L R N Y A F K H A I E F P H S B A R T L N D A N P R L H E I Y G N P I P
G T G A G C A T T G A G A A A T T A C C C C T T A A G A T G C T A T C G A A T T T C A C O G T C G A G C C G A A A C O T T G A A C A T G C A A A T C C C O G T T A C A T A A A A T T A T G A A T T C C C G A A A T A C C C
180
L Y N E Y A E I G T R F D D E P T D E R L V B H L N T I V Y S A E R V H Y I O C
C A T T A T A C A T G G A A T A T G C G A A T A G C G A C T A G A T T T G A C G A T G A C C G A C T G A T G A A A A G T A G T A T C A A T G C T T C A T A T A T C O T T T A C A G T C C C A A G A G O T C A C A T A T T G G A T
200
O D L R T L N Q F E K R S P O R F R R V L W M V Y D F I A P E C S D P N V I V H
O T G O T G A C C T A C T A C C C T A A T G C A O T T C A G A A A C A T C A C C A G A C C O T T T A G A A G O T T O T T A T G C C A C O T A T A T G A C C C A A T A G C A C C T G A G T O T T C A G A T C C A A C O T T A T A G T C
220
N I N V D S E K E D I L E H N H F L K R V E R P F I M D V S S D R S Q N H D H E V
A T A A T A T A T G O T G A T T C A A G A A A G A C A T T T T T G A A C A T A T G A A T F T T T G A A A C O T T T G A G A G A C C T T C A T A T G G G A T A T A T C O T G A G T C G A T C C G A G A A T G A T G A T C A G T
240
E T T R P A E D R L G E E I A Y E N G O A F S S A L I E K H R I P N S E K D E Y H C
O G G A G C A C A G A G O T T T G C G G A G A T A G A T T G O G T G A G A A A T A G C T T A T G A A A T G O G T O G C A T T T T C C A O T G C A T T G A T A A G C A G G A T C C G A A T T C A A A G A C A A T A C A C T
260
I S T Y L F P Q P G A D A D N Y E L R N F H E L R G Y S H V D R H H R P D A S V
G C A T T T G A C A C T A T T A T G C C C A A C C G O G G C G A T C O G G A T A T O T A T G A A T A A G G A A T T C A T G A G A T T G A G A O T T A C T C A C A C O T G A T C C C A C A T O C A T C C C A G C C T C C C
280
T E V V S R D V R E N V E L Y H G R D C O S F L K E R L F E E L H I V R K N O L
T G A C A A A G T T O T T C A C O T G A T T O C C G A A A A T O T C G A A T T O T A C A C O G T C C G A T T O T G A O C T T T C T A A A A A A G A G A C T A T T T G A A C A C T T C A T A T T O T A C O T A A A A T G O A T
300
L H E S D E P R A D L F Y L T N R C N H G L E P S I Y E V N E K S V I A T A V V
T O T T A C A G A A G T A T A G C C A C A G C C G A T C O T T T T A T T G A C C A A T C O G T C A A T A T G O G A T T G A A C C T A G A T T G A A C C T A G A C T A C T C T O T T G O G
320
G R A P L Y D Y D D F A L P R S T V H L N G S Y R D I R I L D G N G A I L F L M
T O G C C C T C C C C T T A T A T G A T A T A T G A T T T C C G C T A C C A G A T C A C C O T T A T O C T C A C O G A T C C T A C C O G G A T C A G A A T T A G A T O C C A A T G O C C A A C C T A T T C T A A
340
N R Y P D I V E K D L T Y D P A M A N H F A V S L E E P I P D P P V P D I S L C
T O T G A G T A C C C C A T A T C G T A A A G A A G A T T T G A C O T A T A G C C T C O G C O G G O G A T T T T O C T O T T T O C C T A A A G G A C C G A T A C C T G A T O C T C T O T C C T G A T A T T C T T T O T
360
R F I G L R V E S S V L R V R N P T L H E T A D E L P T L H E T A D E L K R N H
O T A G O T T C A T C O G A T C C G C T C A A T A C C O T G O A G G T C C G A A A C C A A C A T T A C A T A G A G A C C O C T A C G A A C A T T A C A T A G A G A C C O C T A C G A A C T G A A A C C G A T G O
380
L D L S C H L Y V T L N S G A Y V T D L F W W F E H I L D W S A Q N H R E Q K L R
G A T T G G A T T T G T C A T T A T A T G C A C A T T A A T T G C C C C O C T A T G T C A C A G A T C T G T T T T O T G O T T A A G A T A T T C A G A T T C T G C C G A A A C A C O G G A C C A A A A C T A C
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420
R E G A S I D S W L E L R L L L
T G A G A G A G G A C C C T C G A T T G A T C T O G C T G A A A T T A C T C O T C A C T T A T A A T G O U T G A C T T A G O T T G A G O G G C A T O T A C A A C T T A C
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