
The sequence of cDNA of bovine coronavirus 32K nonstructural gene

Graham J.Cox, Michael D.Parker and Lorne A.Babiuk

 Veterinary Infectious Disease Organization, 124 Veterinary Road, Saskatoon, Saskatchewan S7N 0W0, Canada
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In addition to the four structural proteins of bovine coronavirus a minimum of four virus-encoded nonstructural proteins are found in infected cells. The nucleotide sequence of the NS 32 is presented. The gene is situated immediately upstream from the E3 gene and terminates within the NS32-E3 conserved intergenic region¹. An ORF extends from nucleotides 15 to 845 and the computer generated translational product of 32K is in agreement with our observations (unpublished) and reports for other coronaviruses². In addition to the conserved intergenic region (single underline) this gene shares homology (65% at the nt level, 45% at the aa level) with the ORF-1 in mRNA2 of MHV-A59².

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1  TCTAAACTTTAAGAATGGCAGTTGCTTATGCAGACAAGCCATACTCTTATTAATTTTC
61  CACTTACCCAGTTTGAGGGTTTGTGTAAATTATAAAGGTTTACAATTTCAACTTCTCG
121 ATGAAGGAGTGGATTGTAAATACAAACAGCGCCGCACATTAGTCTTGCTATGCTGGATA
181 TTCAGCCTGAAGACTATAGAAGTGTGATGTTGCTATTCAAGAAGTATTGATGACATGC
241 ATTGGGGTGAGGGCTTTCAGATTAATTTGATAACCCCATATCCTAGGAAGATGCATAG
301 TTTTAGATGTAAAGGTGTAGAAGAAATGCATGATGATTTAGTTAATTACATTCGTGATA
361 AAGGTTGTGTTGCTGACCAATCCAGGAAATGGATTGGACATTGCACCATAGCCCAACTCA
421 CGGATGCTGCACTTTCATTAAGGAAAATGTTGATTTTCATAAACAGCATGCAATTCAAT
481 ATAAAATCACTATCAACCCCTCATCCCGCTAGACTTGAAATAGTTAAGCTTGGTGCTG
541 AAAAGAAAGATGGTTTTTATGAAACCATAGTTAGCCACTGGATGGGAAAGTCGTTTTGAAT
601 ATAATCCACCCACTGATAAGCTAGCTATGATTATGGGTTATTGTTGTTTCAGAAGTGGTGC
661 GTAAAGAGCTAGAAGAAGGTGATCTTCCCGAAGATGATGATGATGCTTGTTTAAAGCTAT
721 CGTACCATTATGAAAACAATCTTGTTCTTTTCGACATGTCTACAGGAAAGTCTTATTT
781 CCGTAAGTCTTGTAATTTAGATTGTAATTTGTTGGGGTTTATGAAATCTCCAGTTGAAG
841 AAGACTAAAC

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References

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2. Luytjes, W. et al (1988) *Virology* 166:415-422