Nucleotide sequence of gene 1 of the UK tissue culture adapted strain of bovine rotavirus

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A full length cDNA clone corresponding to RNA segment 1 of the UK tissue culture adapted strain of Bovine Rotavirus was isolated from a pAT153 library (1). The nucleotide sequence of the viral insert was determined by dideoxy sequencing following subcloning into M13. The final sequence obtained was 3302 base pairs and contained the terminally conserved sequences found on all group A rotavirus genes (2). The gene contained a single long open reading frame (bases 19-3282) giving rise to a protein VP1 (3) of 1088 amino acids with a calculated molecular weight of 125,061 daltons. Comparison of the UKtc gene 1 sequence with that from the other strain of rotavirus subject to intensive molecular analysis, namely the simian virus SA11 (4), showed that the overall sequence conservation was high (85.6% at the nucleotide level and 97% at the amino acid level). The gene 1 sequence of the RF strain of bovine rotavirus (5) was even more similar to that of the UKtc reported here (92.7% at the nucleotide level and 98.8% at the amino acid level).

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REFERENCES

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