Bacteriophage T4 gene 26

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Gene product 26, a structural component of the central hub of the phage baseplate, was determined as a protein with a molecular mass of 41 kDa (1). A clone, expressing gene 26, and complementing a gene 26 mutation produces a 24-kDa protein (2). Although gene 26 is a late gene, it is expressed in the counterclockwise direction (2, 3, 4). The coding region of gene 26 is preceded by a late promoter, P_L26. A divergent late promoter, P_L51, partially overlapping P_L26, directs transcription for gene 51 in the opposite, i.e. clockwise direction. The sequence of gene 26 predicts a 208 amino acids residue peptide of Mr = 23.9 kDa, pI = 6.06. The over-expression of gene 26 (Fig. 1) in the T7 RNA-polymerase-based system of Tabor and Richardson (5) together with sequence analysis establish that gene 26 specifies two in-frame overlapping peptides of 24 and 8–9 kDa, respectively.

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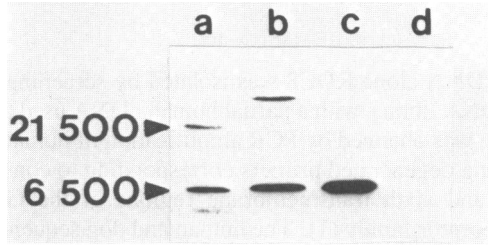

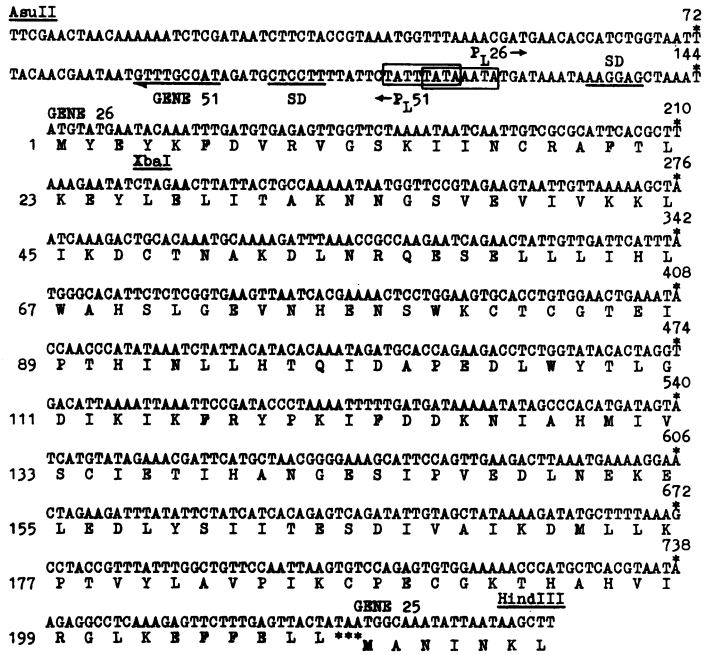

Figure 1. Over-expression of gene products 26. Autoradiograph of a 10–17.5% SDS-PAGE. Lanes: a) molecular mass markers as indicated. b) 24-kDa and 8–9-kDa peptides expressed from AsuII-HindIII fragment in plasmid pT7–5. c) the 8–9kDa peptide expressed from XbaI-HindIII fragment in plasmid pT7–5. d) control, pT7–5 without T4 DNA insert.