

Heterologous Expression of SARS-CoV ORF10 and X5 Genes in *E. coli* and *Streptomyces lividans* TK24

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In previous studies a variety of novel accessory genes has been identified that were interspersed among the structural genes of the SARS-CoV (severe acute respiratory syndrome coronavirus) genome. The predicted unknown proteins (PUPs) encoded by the accessory genes, which are considered to be unique to the SARS-CoV genome, might play important roles in the SARS-CoV infection. Two of these genes, called ORF10 and X5, were synthesized and introduced into *E. coli* and *Streptomyces lividans* TK24, respectively. SDS-PAGE and Western blot revealed that the ORF10 and X5 genes have been expressed in the two hosts. This is the first report of heterologous expression of ORF10 and X5 genes in *E. coli* and *S. lividans* TK24. This work makes it possible to study the structure and potential functions of proteins encoding by these two genes.

Key words: SARS-CoV, ORF10 and X5, Heterologous Expression