



Fig. 9. Organization of the *mrk-fim* gene clusters. The gene cluster of type 1 fimbriae and type 3 fimbriae are indicated with black and white arrows, respectively. Location of the putative promoters P_{L-mrkA} , P_{S-mrkA} , P_{fimB} , and P_{fimE} are marked, and transcription direction for each open reading frame is also shown. *orf1*, a gene encoding a ABC-type transporter system; *phgS*, a *pecS* homolog; *phgM*, a *pecM* homolog; *orf2*, a hypothetical membrane protein gene. Below the diagram, the sequences containing the putative promoters P_{L-mrkA} and P_{S-mrkA} are shown and the predicted CRP and LRP binding sites are underlined. The primers used to identify the transcription start are also indicated (pA4, pA5, pA6).