Cytosine deaminase catalyzes the deamination of cytosine to uracil as part of the pyrimidine salvage pathway in *Escherichia coli* (7). The gene encoding cytosine deaminase, *codA*, is part of the *codBA* operon (3, 6). Previous mapping studies have shown that the *cod* operon is closely linked to the *lac* operon at approximately 8 min on the *E. coli* chromosome (4).

The Kohara lambda phage clones carrying inserts spanning the 6- to 8-min region of the chromosome were used in spot complementation testing to determine the physical location of the *codBA* operon (5). The phages were tested with an *E. coli* strain, BA101, that carries a deletion of the *codBA* operon (*ΔargF-lac*) as well as a mutation in *pyrF*. This strain is unable to utilize cytosine as the sole pyrimidine source unless cytosine deaminase is provided in trans (1, 7). Of the phage lysates tested (9G4, 6E6, 1F6, 9F1, 10A6, and 7H10), two (9F1 and 10A6) allowed BA101 to use cytosine as a pyrimidine source. An EcoRI-BamHI fragment of approximately 10.8 kb and an EcoRI-HindIII fragment of approximately 11.5 kb were cloned from λ9F1 into pBR322. The presence of the *codA* gene was confirmed by assaying cell extracts prepared from cells transformed with these plasmids for cytosine deaminase enzymatic activity (8).

The *codA* gene was subsequently localized to an approximately 3.3-kb *PvuII-BglII* fragment (2). There is good agreement between the restriction map generated from DNA sequencing in this study and the physical map of the *E. coli* chromosome generated by Kohara et al. (5) and the restriction map recently published by Danielsen et al. (3). Sequence analysis showed two closely spaced *PstI* sites (201 bp apart) that were not resolved on the physical map (Fig. 1). Single sites were detected for *BglII, EcoRV*, and *PvuII*. No sites were found for the remaining four enzymes (*BamHI, EcoRI, HindIII*, and *KpnI*).

We thank Yuji Kohara for the set of lambda clones and B. Bachmann for strain X82. We would also like to thank C. Richards and P. Conderay for helpful discussions.

**REFERENCES**


