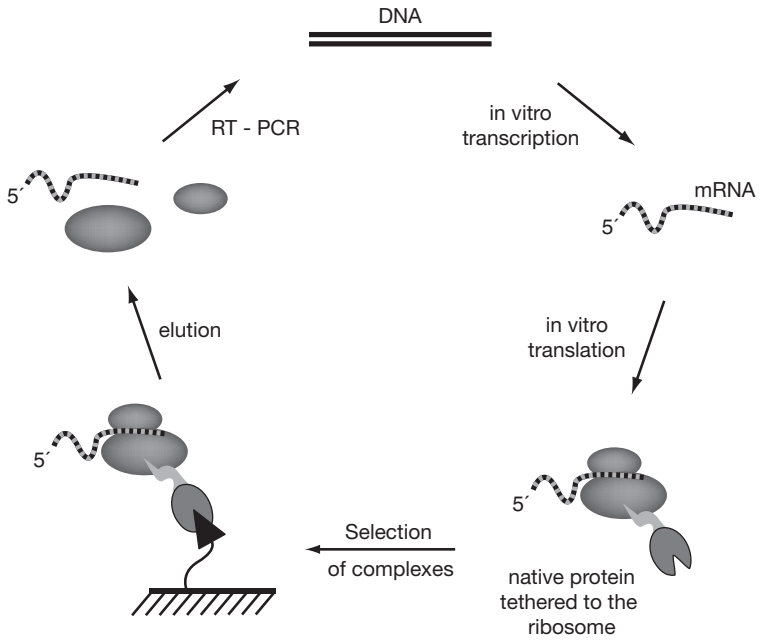

FIGURE 1. Principle of ribosome display. A DNA library encoding open reading frames lacking a stop codon at the 3´ end is transcribed in vitro. The mRNA is purified and used for in vitro translation. The ribosome stalls at the end of the mRNA (or earlier). Due to the absence of a stop codon, the encoded protein is not released and can fold correctly on the ribosome. The carboxy-terminal spacer peptide is in the ribosomal tunnel, and its own carboxyl terminus is connected to the peptidyl-tRNA. The mRNA–ribosome–protein ternary complexes are used for affinity selection by an immobilized target or ligand. After washing away unbound complexes, the bound ribosomal complexes are dissociated. The mRNA is purified and used for reverse transcription and PCR amplification. The PCR product can be used directly for the next ribosome-display selection cycle.

Protein–Protein Interactions: A Molecular Cloning *Manual*, 2nd Ed., © 2005 by Cold Spring Harbor Laboratory Press, Chapter 27, Figure 1.