Strains	*Mutations*	*When to use*	*When **not** to use*
DH5alpha	*recA1* *endA1* *lacZΔM15*	Routine prokaryotic DNA cloning, and general DNA manipulation	Eukaryotic DNA cloning When using large vectors If the downstream steps involve using restriction enzymes, especially those for which methylation at the recognition site can hinder enzyme cleavage.
DH10B	*recA1* *endA1* *lacZΔM15* Deletion of the mdrs loc Deletion of leuLABCD	Cloning eukaryotic DNA and large vectors	If the downstream steps involve using restriction enzymes, especially those for which methylation at the recognition site can hinder enzyme cleavage.
JM109	*recA1* *endA1* *hsdR17*(rK-mK+) *lacZΔM15*	Routine cloning, plasmid maintenance and propagation, cloning DNA with repeat sequences	If the downstream steps involve using restriction enzymes, especially those for which methylation at the recognition site can hinder enzyme cleavage. Not compatible with a vector with a selectable marker for the antibiotic nalidixic acid because this strain is resistant to this antibiotic.
HB101 (RR1 Derivative recA+)	*recA13* *hsdS20*(rB- mB-) *leuB6* *proA2* recA+ (RR1 Derivative)	Suitable for vectors that do not require alpha-complementation for blue-white screening Ideal for sub-cloning Ideal for storage and propagation of plasmids	Does not offer alpha-complementation for blue-white screening, so this strain cannot be used with plasmids that offer blue-white screening.

References

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