Restriction Defects: McrA, McrBC and Mrr all restrict methylcytosine-containing DNA methylated by the CpG methylase (M.Sss I) (1). In addition, McrA and McrBC specifically restrict DNA modified by different sets of more sequence-specific cytosine methylases (3,4). Restriction by each of these three restriction systems individually (tested with DNA modified with the M.Sss I phage) is: McrA, 200-fold; McrBC, 100-fold; Mrr, 200-fold. Cumulative restriction when all three are present in the same cell is > 5,000-fold. In addition, EcoK restricts DNA not modified at K sites by 10-fold to 5,000-fold, depending on the number of sites (5). ER2267 is deficient in all four systems.

Other Properties: Selectable F’ (Kan’); suitable for use with M13, pUC-type, and hybrid (phagemid) vectors that make use of lac α-fragment complementation (blue/white screen); overproduces lac repressor (lacIq); recA stabilizes repeat sequences and reduces plasmid multimerization.

Notes: Storage at −70°C is recommended for periods longer than 30 days. Avoid repeated freeze/thaw cycles.

References: