

*E. coli* K12

ER2267



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E4103S 006150820081

E4103S

Lot: 0061508 Exp: 8/20 Store at -20°C

**Description:** A suspension of *E. coli* ER2267 which has been grown in rich medium and brought to 50% glycerol. MM294 background: *EcoK* r<sup>-</sup> m<sup>+</sup> McrA<sup>-</sup> McrBC<sup>-</sup> Mrr<sup>-</sup>.

**Genotype:** F<sup>+</sup> *proA*<sup>+</sup> *B*<sup>+</sup> *lacI*<sup>H</sup> Δ(*lacZ*)M15 *zff::mini-Tn10* (Kan<sup>R</sup>)/Δ(*argF-lacZ*)U169 *glnV44 e14*<sup>-</sup> (McrA<sup>-</sup>) *rfbD1*? *recA1* *relA1*? *endA1* *spoT1*? *thi-1* Δ(*mcrC-mrr*)114::IS10

**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 I 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<sup>+</sup> (Kan<sup>r</sup>); 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 (*lacI*<sup>H</sup>); *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:**

1. Kelleher and Raleigh (1991) *J. Bact.* 173, 5220–5223.
2. Raleigh and Wilson (1986) *PNAS* 83, 9070–9074.
3. Waite-Rees et al. (1991) *J. Bact.* 173, 5207–5219.
4. Heitman and Model (1987) *J. Bact.* 169, 3243–3250.
5. Murray et al. (1973) *Mol. Gen. Genet.* 120, 261–281.



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CERTIFICATE OF ANALYSIS

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