E. coli K12 ER2267

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E4103S 0061404 19041

E4103S

Lot: 0061404 **Exp: 4/19** **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: *Eco*K r⁻ m⁺ McrA⁻ McrBC⁻ Mrr⁻.

Genotype: F´ *proA⁺B⁺ lacI^q* Δ*(lacZ)M15 zzf::mini-Tn10* (Kan^R)/ Δ*(argF-lacZ)U169 glnV44 e14⁻* (McrA⁻) *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, *Eco*K 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^r); 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^q*); *rec*A 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.

CERTIFICATE OF ANALYSIS

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