

E. coli keio knockout parent strain BW25113

Cat. #OEC5042

Product description

The *E. coli* K-12 BW25113 parent strain is the common background genotype used for the generation of the Dharmacon™ *E. coli* Keio Knockout Collection, which is a set of precisely defined, single-gene deletions of all nonessential genes in *E. coli* K-12. Out of 4288 genes targeted, mutants were obtained for 3985 genes. Two independent mutants were obtained for each deleted gene, yielding a total of 7970 knockout strains (Baba *et al.*, 2006).

Using λ Red recombination, a FRT-flanked kanamycin cassette was utilized to replace each coding region. This cassette may be excised by FLP recombination, leaving an in-frame, translatable sequence that includes the endogenous start, a short recombinational scar sequence, and an 18-nucleotide C-terminal coding sequence from the endogenous gene. For details concerning cassette excision, please consult (Datsenko and Wanner, 2000).

This collection is a new resource for systematic analyses of unknown gene functions and gene regulatory networks, but also for genome-wide testing of mutational effects in a common strain background.

Genotype of BW25113: *rrnB3 ΔlacZ4787 hsdR514 Δ(araBAD)567 Δ(rhaBAD)568 rph-1*.

Quality control

All cultures are checked for growth prior to shipment.

Shipping and storage

The *E. coli* parent strain BW25113 is shipped as bacterial culture in 2x LB broth (low salt)* medium with 8% glycerol. Individual constructs are shipped at room temperature.

*1x LB medium can be used instead of 2x LB broth medium.

References

1. T. Baba, T. Ara, *et al.*, Construction of Escherichia coli K-12 in-frame, single-gene knockout mutants: the Keio collection. *Mol Syst Biol* **2:2006.0008** (2006).
2. K.A. Datsenko, B.L. Wanner, One-step inactivation of chromosomal genes in Escherichia coli K-12 using PCR products. *PNAS* **97(12)**, 6640-6645 (2000).

If you have any questions, contact

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