

E. coli Keio Knockout Collection

Applicable Catalog Numbers:

Cat. #	Description
OEC4987	<i>E. coli</i> Keio Knockout Strain
OEC4988	<i>E. coli</i> Keio Knockout Collection

Product Description:

The Dharmacon *E. coli* Keio Knockout Collection is a set of precisely defined, single-gene deletions of all nonessential genes in *Escherichia coli* K-12. 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 used 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, *E. coli* K-12 BW25113.

Quality Control:

All cultures are checked for growth prior to shipment.

Shipping and Storage:

Individual *E. coli* constructs are shipped as bacterial cultures of *E. coli* in 2x LB broth (low salt)* medium with 8% glycerol, 25 μ g/mL kanamycin. Individual constructs are shipped at room temperature. Collections are shipped in 96-well plate format on dry ice. Individual constructs and collections should be stored at -80 °C.

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

To allow any CO₂ that may have dissolved into the medium from the dry ice in shipping to dissipate, please store constructs at -80 °C for at least 48 hours before thawing.

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