

# Bacillus Genetic Stock Center

New Product Announcement

November 2001

## BACILLUS SUBTILIS AUTOLYSIN DEFICIENT MUTANT COLLECTION

The Bacillus Genetic Stock Center is pleased to offer an isogenic set of *Bacillus subtilis* mutants deficient in the major autolysins. Philippe Margot, from the Dimitri Karamata group at the Institut de Génétique et de Biologie Microbiennes in Lausanne, Switzerland, kindly donated the collection.

*B. subtilis* grows rapidly, with doubling times of 30 minutes in rich media at 37°C. Its thick cell wall must rearrange continuously to allow for surface expansion. Specific peptidoglycan-degrading enzymes, the autolysins, accomplish this task for the organism. The major hydrolases have been identified. The set of five strains detailed below contain knockouts in one or more genes that specify these hydrolases. Our thanks to Dr. Margot for providing this strain set.

### STRAINS IN THE COLLECTION

BGSC No.:	1A788
Original Code:	L16610
Reference:	Margot P (1999) Microbiol 145:57; see also Margot P <i>et al.</i> (1994) Mol Microbiol 12:535
Genotype:	<i>lytD::tet</i>
Notes:	Knockout of LytD, an <i>N</i> -acetylglucosaminidase. No effect on cell growth; resistant to Tc (7 µg/ml).
BGSC No.:	1A789
Original Code:	L16611
Reference:	Margot P (1999) Microbiol 145:57; see also Margot P and Karamata D (1992) Mol Gen Genet 232:359
Genotype:	<i>lytABC::neo</i>
Notes:	Knockout of LytC, encoding <i>N</i> -acetylmuryl-D-alanine amidase. No effect on cell growth. Resistant to Nm (7 µg/ml).
BGSC No.:	1A790
Original Code:	L16638
Reference:	Margot P (1999) Microbiol 145:57; see also Margot P <i>et al.</i> (1998) J Bacteriol 180:749
Genotype:	<i>lytE::cam</i>
Notes:	Knockout of LytE, encoding a putative endopeptidase. No effect on cell growth. Resistant to Cm (3 µg/ml)
BGSC No.:	1A791
Original Code:	L16646
Reference:	Margot P (1999) Microbiol 145:57
Genotype:	<i>lytF::spc</i>
Notes:	Knockout of LytF, encoding $\gamma$ -D-glutamate-meso-diaminopimelate muropeptidase. No effect on cell growth. Resistant to Sp (60 µg/ml).
BGSC No.:	1A792
Original Code:	L16648
Reference:	Margot P (1999) Microbiol 145:57
Genotype:	<i>lytABC::neo lytD::tet lytE::cam lytF::spc</i>
Notes:	Knockout of LytC, LytD, LytE, and LytF. Autolysin defective; cells grow in long chains.