Escherichia coli (Migula) Castellani and Chalmers

23804™

Description

Strain designation: AB3622
Deposited As: *Escherichia coli* (Migula) Castellani and Chalmers
Type strain: No

Storage Conditions

Product format: Freeze-dried

Intended Use

This product is intended for laboratory research use only. It is not intended for any animal or human therapeutic use, any human or animal consumption, or any diagnostic use.

BSL 1

ATCC determines the biosafety level of a material based on our risk assessment as guided by the current edition of *Biosafety in Microbiological and Biomedical Laboratories (BMBL)*, U.S. Department of Health and Human Services. It is your responsibility to understand the hazards associated with the material per your organization's policies and procedures as well as any other applicable regulations as enforced by your local or national agencies.

ATCC highly recommends that appropriate personal protective equipment is always

used when handling vials. For cultures that require storage in liquid nitrogen, it is important to note that some vials may leak when submersed in liquid nitrogen and will slowly fill with liquid nitrogen. Upon thawing, the conversion of the liquid nitrogen back to its gas phase may result in the vial exploding or blowing off its cap with dangerous force creating flying debris. Unless necessary, ATCC recommends that these cultures be stored in the vapor phase of liquid nitrogen rather than submersed in liquid nitrogen.

Certificate of Analysis

For batch-specific test results, refer to the applicable certificate of analysis that can be found at www.atcc.org.

Growth Conditions

Medium:
ATCC Medium 3: Nutrient agar or nutrient broth
Temperature: 37°C

Handling Procedures

1. Open vial according to enclosed instructions.

2. Using a single tube of #3 broth (5 to 6 ml), withdraw approximately 0.5 to 1.0 ml with a Pasteur or 1.0 ml pipette. Rehydrate pellet.

3. Aseptically transfer this aliquot back into the broth tube. Mix well.

4. Use several drops of the suspension to inoculate a second tube of broth, a slant, and/or plate.

5. Incubate all tubes and plate at 37°C for 24 to 48 hours.

Notes

A series of mutant strains derived from *Escherichia coli*

K-12, each mutant requiring a different growth factor, was prepared in the laboratory of Dr. E. A. Adelberg, Department of Microbiology, Yale University, New Haven, CT for deposit in the ATCC. The parent strain was AB1621 (ATCC 25290). It is F^- and has mutations in the following loci: lac, gal, ara, xyl, mtl, thi, str, tsx, tfr (for map locations, see Taylor, A. L. and D. C. Trotter, Bacteriol. Rev. 31, 332, 1967). The resulting mutant phenotype is: inability to utilize lactose, galactose, arabinose, xylose or mannitol; requirement for thiamine; and resistance to streptomycin and to phages T6 and T4. This stain grows well on any conventional minimal medium, such as half-strength medium 56 (Monad, J., et al., Biochim. Biophys. Acta 7: 585, l951) supplemented with glucose (final concentration: 0.2 percent) and thiamine (final concentration: 10^{-5} percent) and adjusted to pH 7.2. Strain AB1621 (ATCC 25290) was treated with N-methyl-N-nitroso-guanidine as described by Adelberg, E. A., et al. (Biochem. Biophys. Res. Comm. 18: 788, l965). Survivors were plated on Nutrient Agar and small colonies were tested for auxotrophs by inoculation onto minimal-glucose-thiamine agar and Nutrient Agar. Putative auxotrophs were purified by repeated single-colony isolations, and their requirements were identified by planting them on minimal-glucose-thiamine agar supplemented with individual growth factors or combination thereof. The strains selected for final use are ATCC 23783 to 23815, inclusive). They show no colonies in 48 hours at 37ºC when 10^2-10^3 cells are plated on minimal glucose-thiamine agar, and they produce colonies equivalent in size to those produced by the wild type when plated on the same medium supplement with the required growth factor. Supplements are provided at the following final concentrations:

DL-amino acids: 0.1 mg/ml (L-proline used at 0.2 mg/ml)

Adenine and uracil: 0.02 mg/ml

Succinate: 0.2 mg/ml

Vitamins: 0.1 mg/ml

Colonies are glistening, smooth, slightly irregular, and opaque.

Additional information on this culture is available on the ATCC web site at www.atcc.org.

Material Citation

If use of this material results in a scientific publication, please cite the material in the following manner: *Escherichia coli* (Migula) Castellani and Chalmers (ATCC 23804)

References

References and other information relating to this material are available at www.atcc.org.

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Revision

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