# Quantitative Genomic DNA from *Escherichia coli* with ATCC 16S Tag 1

## 47011T1-DQ™

### Description

Quantitative genomic DNA from *Escherichia coli* with ATCC 16S Tag 1 can be used for assay development, verification, and validation as well as monitoring of day-to-day test variation and lot-to-lot performance of molecular-based assays. The quantitative format allows for the generation of a standard curve for quantitative PCR (qPCR) to determine bacterial load. The synthetic Tag 1 allows for use as a spike-in control in assay development, library preparation, quality control, and data normalization for both 16S rRNA and shotgun metagenomics approaches. This product is also a component of MSA-1014.

**Organism:** *Escherichia coli* (Migula) Castellani and Chalmers
**Derived from:** *Escherichia coli* HMS174 (ATCC 47011)
**Type strain:** No
**Specification range:** ≥ 1 x $10^5$ copies/µL
**Volume:** 100 µL

### Storage Conditions

**Product format:** Frozen
**Storage conditions:** -20°C or colder

### 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.

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**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.

## Certificate of Analysis

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

## Handling Procedures

1. Thaw the vial at room temperature and immediately place on ice. Avoid exposing the DNA to repeated freeze-thaw cycles as it may result in degradation.
2. Gently mix the sample to ensure an even distribution of material.
3. Briefly centrifuge the tube before opening to ensure all liquid is at the bottom.

## Notes

Quantitative Genomic DNA from *Escherichia coli* with ATCC® 16S Tag 1

This product is also a component of ATCC® MSA-1014™ for internal spike-in control in metagenomic research. The genome of *Escherichia coli* strain HMS174 (ATCC® 47011™) was engineered with a unique synthetic DNA tag which contains four artificial variable regions (corresponding to the V1 through V4 regions in the 16S rRNA gene) flanked by conserved regions for PCR amplification via 16S rRNA profiling and whole-

genome sequencing assays. The sequence information can be found on the product technical data sheet. Quantitative format allows for metagenomic data normalization and limit of detection assay (See Spike-in Application Note).
Aliquoting is highly recommended to avoid multiple freeze-thaws.

## Material Citation

If use of this material results in a scientific publication, please cite the material in the following manner: Quantitative Genomic DNA from *Escherichia coli* with ATCC 16S Tag 1 (ATCC 47011T1-DQ)

## References

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

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## Revision

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