

# Certificate of Analysis

## MAX Efficiency® DH5α

Product No. 18258012, 18258-012, 11563117

Lot No. 2842911

Date of Manufacture 08-Apr-2024

Expiration Date 03-May-2025

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### Transformation Efficiency

100 µl of competent cells are transformed with 50 pg of supercoiled pUC19 plasmid DNA (non-saturating conditions). Test transformations are performed on a minimum of 3 vials per lot. Transformed cultures are plated on LB plates containing 100 µg/ml ampicillin and incubated overnight at 37°C.

Transformation efficiency must be greater than  $1.0 \times 10^9$  cfu/µg pUC19.

### Antibiotic Sensitivity

Cells must exhibit growth on LB medium plates.

Untransformed cells must show no growth on LB plates containing 100 µg/ml ampicillin, indicating the absence of any ampicillin resistance markers.

Untransformed cells must show no growth on LB plates containing 50 µg/ml kanamycin, indicating the absence of any kanamycin resistance markers.

Untransformed cells must show no growth on LB plates containing 15 µg/ml chloramphenicol, indicating the absence of any chloramphenicol resistance markers.

Untransformed cells must show no growth on LB plates containing 50 µg/ml Zeocin™, indicating the absence of any Zeocin™ resistance markers.

Untransformed cells must show no growth on LB plates containing 15 µg/ml tetracycline, indicating the absence of any tetracycline resistance markers.

Untransformed cells must show growth of no more than 5 colonies on LB plates containing 100 µg/ml streptomycin, indicating the absence of streptomycin resistance markers and a low rate of spontaneous mutation.

## Growth On Minimal Media

Cells must exhibit growth on 2B minimal medium plates, indicating the absence of any auxotrophic markers.

## Lac Phenotype

Untransformed cells must exhibit growth of white colonies on LB plates containing 400 µg/ml X-Gal and 1 mM IPTG, indicating a Lac<sup>-</sup> phenotype.

## Gal Phenotype

Cells must exhibit growth of bright red colonies on MacConkey galactose plates, indicating a Gal<sup>+</sup> phenotype.

## RecA Phenotype

Cells must exhibit inhibited growth on LB medium plates containing 8 µg/ml nitrofurantoin, indicating a RecA<sup>-</sup> phenotype.

## Absence of Bacteriophage

To verify the absence of phage contamination, 0.5-1.0 ml of DH5α™ competent cells are added to LB top agar and poured over LB plates. After overnight incubation at 37°C, no plaques should be detected.

## Results

Product meets all specifications.

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For Research Use Only. Not for use in diagnostic procedures.

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