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|---|---|---|
| | | **Version: v07** |

# Glycerol-Free Taq HS 50U/µL

For Research and Further Manufacturing use only

| | |
|---|---|
| Catalog No: | MDX011 |
| Lot No: | EN018-B124050 |
| Storage Conditions: | -20°C |
| Component Lot No: | GF-224201A |
| Expiry date: | February 2026 |

## Quality Control Parameters

Lyophlization-compatible, high concentration (50 U/µL), glycerol free DNA enzyme for automated high-throughput testing

| Analysis | Specification | Result |
|---|---|---|
| Functional | Activity is measured as DNA polymerase units by quantitative PCR analysis against a reference Taq DNA polymerase standard curve.<br>Pass Criteria:<br>Activity must be between 50 and 60 U/µL | 57.63 U/µL |
| Glycerol content | Glycerol concentration is determined by spectrophotometric measurement of a colorimetric product from a coupled enzymatic reaction.<br>Pass Criteria:<br>Glycerol content <0.02 % | Passed |
| Purity | Purity is measured as a percentage of total protein by quantitative gel electrophoresis on Bioanalyzer (Agilent).<br>Pass Criteria:<br>>50 % | 100.0 % |
| DNA contamination | DNA contamination is measured by quantitative PCR on *E. coli* and mouse genomic DNA specific targets.<br>Pass Criteria:<br>Amplification traces must overlay with the negative control. | Passed |

**United Kingdom**
Tel: +44 (0)20 8830 5300
Fax: +44 (0)20 8452 2822

**USA**
Tel: +1 901.382.8716
Fax: +1 901.382.0027

**Germany**
Tel: +49 (0)3371 60222 00
Fax: +49 (0)3371 60222 01

Info@meridianlifescience.com; www.meridianlifescience.com

| | | |
|---|---|---|
| DNase contamination | DNase contamination is measured as DNA substrate degradation against a DNase I dilution series by agarose gel electrophoresis.<br>Limit of detection: 6.25 x $10^{-4}$ KU DNase I.<br>Pass Criteria:<br>No detectable degradation. | Passed |
| RNase contamination | RNase contamination is measured by quantitative PCR against RNase standards.<br>Limit of detection: 9.7 x $10^{-3}$ ng/µL RNase.<br>Pass Criteria:<br>No detectable degradation. | Passed |

QA / QC Representative: Jan Rahnenführer Date: 17th January 2024

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Info@meridianlifescience.com; www.meridianlifescience.com

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|---|---|---|
| | | **Version: 06** |

# Taq HS Antibody, 10 mg/mL

For research or further manufacturing use only

| | |
|---|---|
| Catalog No: | MDX011 |
| Lot No: | EN018-B124050 |
| Storage Conditions: | -20°C |
| Component Lot No: | AB1-224201A |
| Expiry date: | February 2026 |

## Quality Control Parameters

A monoclonal antibody to Taq DNA polymerase for use in hot-start PCR

| Analysis | Specification | Result |
|---|---|---|
| Sensitivity | Sensitivity is measured by qPCR to determine specific product amplification at limiting template concentration<br>Test Criteria<br>Relative amount of amplified specific product must be equal to reference | Passed |
| Efficiency | Efficiency is measured using RT-qPCR to determine relative Taq DNA Polymerase activity across RNA template concentrations ranging 4 orders of magnitude<br>Test Criteria<br>RT-qPCR efficiency must be equal to reference ± 0.5 Ct at each input template concentration | Passed |
| Concentration | Concentration is measured by spectrophotometric analysis.<br>Test Criteria<br>Mean concentration should be between 9.5 and 10.5 mg/mL and the Coefficient of Variation (CV) should be ≤ 5% | 10.1 mg/mL |
| DNA contamination | DNA contamination is measured by quantitative PCR on E. coli and mouse genomic DNA specific targets<br>Test Criteria<br>Amplification traces must overlay with the negative control | Passed |


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**Germany**
Tel: +49 (0)3371 60222 00
Fax: +49 (0)3371 60222 01

Info@meridianlifescience.com; www.meridianlifescience.com

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|---|---|---|
| | | **Version: 06** |

| | | |
|---|---|---|
| DNase contamination | DNase contamination is measured as DNA substrate degradation against a DNase I dilution series by agarose gel electrophoresis<br>Test Criteria<br>No detectable degradation<br>Limit of detection 6.25 x 10-4 kU DNase I. | Passed |
| RNase contamination | RNase contamination is measured by quantitative PCR against RNase standards.<br>Test Criteria<br>No detectable degradation<br>Limit of detection 9.7 x 10-3 ng/µL RNase. | Passed |

QA / QC Representative: Jan Rahnenführer Date: 17th January 2024

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**USA**
Tel: +1 901.382.8716
Fax: +1 901.382.0027

**Germany**
Tel: +49 (0)3371 60222 00
Fax: +49 (0)3371 60222 01

Info@meridianlifescience.com; www.meridianlifescience.com

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|---|---|---|
| | | Version: v05 |

| # Enzyme Dilution Buffer<br>For research or further manufacturing use only | | |
|---|---|---|
| | Catalog No: | MDX011 |
| | Lot No: | EN018-B124050 |
| | Storage Conditions: | -20°C |
| | Lot number: | TDB-224101A |
| | Expiry date: | February 2026 |

## Quality Control Parameters

Enzyme Dilution Buffer is a glycerol-free 10x buffer used for the dilution of Taq antibody or reverse transcriptase.

| Analysis | Specification | Result |
|---|---|---|
| Functional | A 3Kb fragment was amplified with a dilution series of Enzyme Dilution Buffer, using standard conditions and 30 cycles.<br>A 3Kb fragment was amplified with a dilution series of *Taq polymerase*, using standard conditions and 30 cycles.<br>Single distinct bands were observed with agarose gel electrophoresis (ethidium stained). | Passed |
| Glycerol determination | Glycerol content is < 0.2% determined by spectrophotometric analysis and comparison to a standard curve. | Passed |
| DNA contamination | Quantitative PCR analysis with no template. Presence of *E. coli* and mouse genomic DNA checked. Test sample must amplify in line with a reference sample. | Passed |
| DNase contamination | Incubation of a 1Kb double stranded DNA fragment. Incubation for 4 hours at 37°C with dilution series of DNase I. Analysed by agarose gel electrophoresis. Test sample must show less degradation than the limit of detection $6.25 \times 10^{-4}$ KU/µL. | Passed |
| RNase contamination | Quantitative PCR analysis with high and low RNase standards. Test sample must show less RNase activity than the limit of detection: $9.7 \times 10^{-3}$ ng/µl RNase. | Passed |

QA / QC Representative: Jan Rahnenführer Date: 17th January 2024


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Tel: +44 (0)20 8830 5300
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**USA**
Tel: +1 901.382.8716
Fax: +1 901.382.0027

**Germany**
Tel: +49 (0)3371 60222 00
Fax: +49 (0)3371 60222 01

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