New England Biolabs
Product Specification

Product Name: Monarch® Genomic DNA Purification Kit
Catalog #: T3010G

Kit Components:
- Monarch® gDNA Tissue Lysis Buffer (T3011)
- Monarch® gDNA Cell Lysis Buffer (T3012)
- Monarch® gDNA Blood Lysis Buffer (T3013)
- Monarch® gDNA Binding Buffer (T3014)
- Monarch® gDNA Wash Buffer (T3015)
- Monarch® gDNA Elution Buffer (T3016)
- Monarch® gDNA Purification Columns (T3017)
- Protease K, Molecular Biology Grade (P8107)
- Monarch® RNase A (T3018)
- Monarch® Collection Tubes II (T2018)

Shelf Life: 18 months
Storage Temp: 25°C
Specification Version: PS-T3010G v1.0
Effective Date: 25 Aug 2021

Assay Name/Specification (minimum release criteria)

Functional Testing (Blood Cell Lysis Buffer, Monarch®) - Genomic DNA is purified from 8 samples of whole pig blood using the protocol for extraction and purification of genomic DNA for Mammalian Whole Blood (non-nucleated), with ≥2 µg of gDNA being recovered in ≥80% of the samples. OD 260/280 and 260/230 are ≥1.75 in ≥80% of the samples.

Functional Testing (Cell Lysis Buffer, Monarch®) - Genomic DNA is purified from 8 individual aliquots of HeLa cells (10⁶ cells/aliquot) using the Protocol for Extraction and Purification of Genomic DNA from Cultured Cells, resulting in ≥3 µg of gDNA being recovered in ≥80% of the samples. OD 260/280 and 260/230 are ≥1.75 in ≥80% of the samples.

Functional Testing (DNA Recovery and Purity) - Twenty-four Monarch® gDNA Purification Columns are tested with 5 µg of HindIII digested Lambda resulting in ≥75% recovery in ≥80% of the samples. OD 260/280 and 260/230 are ≥1.75 in ≥80% of the samples.

Functional Testing (RNase A, Monarch®) - A 10 µl reaction in NEBuffer 4 containing 40 ng of fluorescein labeled RNA transcript and RNase A is incubated at 37°C. After incubation for 5 minutes, complete disappearance of the RNA substrate occurs at ≤1.0 µg/ml of RNase A, as determined by gel electrophoresis using fluorescent detection.
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<table>
<thead>
<tr>
<th>Assay Name/Specification (minimum release criteria)</th>
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<tbody>
<tr>
<td><strong>Functional Testing (Tissue Lysis Buffer, Monarch®)</strong> - Genomic DNA is purified from 8 NEB10-Beta samples treated using the Supplemental Protocol for Genomic DNA Purification from Gram-negative Bacteria, resulting in $\geq 5 \mu\text{g}$ of gDNA being recovered in $\geq 80%$ of the samples. OD 260/280 and 260/230 are $\geq 1.75$ in $\geq 80%$ of the samples.</td>
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* **Individual Product Component Note** - Standard Quality Control Tests are performed for each component included in Monarch® Genomic DNA Purification Kit and meet the designated specifications.

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Derek Robinson  
Director, Quality Control  

Date  25 Aug 2021