For general laboratory use.

MagNA Pure LC Total Nucleic Acid Isolation Kit - Lysis/Binding Buffer Refill

Version: 05
Content version: November 2016

Cat. No. 03 246 779 001 1 bottle

Store the kit at +15 to +25°C.
1. General Information

1.1. Contents

<table>
<thead>
<tr>
<th>Bottle</th>
<th>Cap</th>
<th>Label</th>
<th>Function / Description</th>
<th>Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Green</td>
<td>MagNA Pure LC Total Nucleic Acid Isolation Kit, Lysis/Binding Buffer - Refill</td>
<td>For cell lysis, binding of total nucleic acids and inactivation of nucleases</td>
<td>100 mL</td>
</tr>
</tbody>
</table>

*The Lysis/Binding Buffer contains a blue ingredient required for clot detection during automated DNA isolation by the MagNA Pure LC Instruments.*

*Do not use the buffer if it contains precipitates. If a precipitate is visible, warm the solution in a +37°C water bath until the precipitates have dissolved. Do not warm the buffer longer at +37°C than is actually needed for complete dissolution of the precipitate. Before using it, bring the buffer back to +15 to +25°C.*

1.2. Storage and Stability

**Storage Conditions (Product)**

When stored at +15 to +25°C, the buffer is stable through the expiration date printed on the label.

1.3. Additional Equipment and Reagents Required

**Standard Laboratory Equipment**

- Nuclease-free, aerosol-resistant pipette tips
- Nuclease-free reaction tubes
- Standard benchtop microcentrifuge

1.4. Application

The MagNA Pure LC Total Nucleic Acid Isolation Kit Lysis/Binding Buffer Refill is designed for the following applications:

- Lyse unseparated whole blood, EDTA/citrate-preserved, serum, and plasma.
- Provides stabilization of nucleic acids within lysates.
- Compatible with nucleic acid purification with MagNA Pure Instruments, such as the MagNA Pure LC 2.0 instrument, MagNA Pure 96 and MagNA Pure 24.

The MagNA Pure LC Total Nucleic Acid Isolation Kit - Lysis/Binding Buffer Refill is used with MagNA Pure Instruments when requiring additional lysis/binding buffer for producing large numbers of total nucleic acid-stabilized sample lysates from human serum, plasma, and blood. This buffer is blue to enable the instruments to detect clots in the sample material and loss of reaction tips. It is ideal for binding total nucleic acids to magnetic glass particles (MGPs).
2. How to Use this Product

2.1. Before you Begin

Sample Materials

The Lysis/Binding Buffer Refill for the MagNA Pure LC Total Nucleic Acid Isolation Kit is used to process the following sample materials with compatible instruments.

- Unseparated mammalian whole blood, EDTA/citrate-preserved
- Mammalian serum
- Mammalian plasma

Different mammalian species may have different concentrations of blood cells. For some species, a lower volume of blood will be required to keep the cell numbers within the recommended range. Overloading the purification system will purify more DNA and RNA than the MGPs are designed to handle, causing MGPs to clump and become lost during pipetting. Fewer MGPs in the elution step will reduce the total nucleic acid yield.

Control Reactions

Positive And Negative Control Sample Materials

Always run appropriate controls.

To control the entire process, starting from sample preparation to analysis, perform the following controls:

- Positive control, by using a sample material positive for your target.
- Negative control, by using a sample material negative for your target.
- Internal control (IC), by adding a defined amount of a control template to all samples to be purified.

For further information please see the Instructions for Use of the corresponding MagNa Pure kit.

General Considerations

Precautions

- Do not allow Lysis/Binding Buffer to touch your skin, eyes, or mucous membranes. If contact occurs, wash the affected area immediately with large amounts of water; otherwise, the reagent may cause burns. If you spill the reagent, dilute the spill with water before wiping it up.
- Never store or use the Lysis/Binding Buffer near human or animal food.
- Always wear gloves and follow standard safety precautions when handling these buffers.
- Guanidine-thiocyanate in Lysis/Binding buffer can form toxic gases when combined with bleach or acid. If a spilled sample containing this solution is potentially infectious do not directly add bleach for decontamination.
- All relevant procedures should be carried out as quickly as possible.
- Treat all samples of mammalian, but especially of human origin as potentially infectious.
2. How to Use this Product

Safety Information

Laboratory Procedures

- Handle all samples as if potentially infectious, using safe laboratory procedures. As the sensitivity and titer of potential pathogens in the sample material varies, the operator must optimize pathogen inactivation by the Lysis/Binding Buffer or take appropriate measures, according to local safety regulations.
- Do not eat, drink, or smoke in the laboratory work area.
- Do not pipette by mouth.
- Wear protective disposable gloves, laboratory coats, and eye protection when handling samples and kit reagents.
- Do not contaminate the reagents with blood, cells, bacteria, virus, or other contaminants. Use disposable pipettes and nuclease-free pipette tips only, to remove aliquots from reagent bottles. Use the general precautions described in the literature.
- Wash hands thoroughly after handling samples and reagents.
- Complete each phase of the PCR/RT-PCR workflow before proceeding to the next phase. For example, you should finish PCR/RT-PCR sample preparation before starting PCR/RT-PCR setup. Sample preparation, PCR/RT-PCR setup, and the PCR/RT-PCR run itself should also be performed in separate locations.

Waste Handling

- Discard unused reagents and waste in accordance with country, federal, state, and local regulations.
- Safety Data Sheets (SDS) are available online at dialog.roche.com, or upon request from the local Roche office.

2.2. Protocols

Follow the steps below unless instructed otherwise by the corresponding MagNA Pure kit Instructions for Use.

1. Add the appropriate amount of MagNA Pure LC Total Nucleic Acid Isolation Kit I – Lysis/Binding Buffer – Refill to each reaction vial containing sample material (for example, 300 μl Buffer to 50 – 200 μl of sample material).

2. Homogenize the sample material by vortexing three times for 10 seconds each or by pipetting.

3. Sample lysates can be immediately processed or stored long-term at −60°C or below.

   ![Tip] If lysed samples have been stored frozen, mix thoroughly by vortexing three times for 10 seconds before loading samples on the MagNA Pure Instrument.
3. Troubleshooting

Please refer to the Instructions for Use of the MagNA Pure LC Total Nucleic Acid Isolation Kit I and MagNA Pure LC Total Nucleic Acid Isolation Kit – Large Volume for details on how to troubleshoot experimental outcomes using the Lysis/Binding Buffer for purifying genomic DNA with the compatible MagNA Pure Instruments.

4. Additional Information on this Product

4.1. Test Principle

Mixing blood, serum, plasma, and cells with the MagNA Pure LC Total Nucleic Acid Isolation Kit - Lysis/Binding Buffer lyses the cells, inactivates all enzymes, and stabilizes genomic DNA. The chaotropic salts in the lysis buffer facilitate rapid binding of nucleic acids (DNA and RNA) to magnetic glass particles for DNA purification with the compatible MagNA Pure Instruments.

5. Supplementary Information

5.1. Conventions

To make information consistent and easier to read, the following text conventions and symbols are used in this document to highlight important information:

<table>
<thead>
<tr>
<th>Text convention and symbols</th>
<th>Information Note: Additional information about the current topic or procedure.</th>
</tr>
</thead>
<tbody>
<tr>
<td>! Important Note: Information critical to the success of the current procedure or use of the product.</td>
<td></td>
</tr>
<tr>
<td>1 2 3 etc. Stages in a process that usually occur in the order listed.</td>
<td></td>
</tr>
<tr>
<td>1 2 3 etc. Steps in a procedure that must be performed in the order listed.</td>
<td></td>
</tr>
<tr>
<td>* (Asterisk) The Asterisk denotes a product available from Roche Diagnostics.</td>
<td></td>
</tr>
</tbody>
</table>

5.2. Ordering Information

Roche offers a large selection of reagents and systems for life science research. For a complete overview of related products and manuals, please visit and bookmark our homepage lifescience.roche.com.

<table>
<thead>
<tr>
<th>Product</th>
<th>Pack Size</th>
<th>Cat. No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>LightCycler® 480 Block Kit 96 Silver</td>
<td>1 block kit, for 96-well PCR multiwell plates</td>
<td>05 015 219 001</td>
</tr>
</tbody>
</table>
5.3. Trademarks
MAGNA PURE is a trademark of Roche.
All third party product names and trademarks are the property of their respective owners.

5.4. License Disclaimer
For patent license limitations for individual products please refer to: http://technical-support.roche.com.

5.5. Regulatory Disclaimer
For general laboratory use.

5.6. Safety Data Sheet
Please follow the instructions in the Safety Data Sheet (SDS).

5.7. Contact and Support
If you have questions or experience problems with this or any Roche product for Life Science, please contact our Technical Support staff. Our scientists are committed to providing rapid and effective help.
Please also contact us if you have suggestions for enhancing Roche product performance or using our products in new or specialized ways. Such customer information has repeatedly proven invaluable to the research community worldwide.

To ask questions, solve problems, suggest enhancements or report new applications, please visit our Online Technical Support Site.

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• Certificates of Analysis
• Information Material

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