



A QIAGEN / BD Company



# PAXgene<sup>®</sup>

## *Bone Marrow RNA Tube*

FOR THE COLLECTION OF HUMAN BONE MARROW AND  
IMMEDIATE STABILIZATION OF INTRACELLULAR RNA

### For Research Use Only

Not for use in diagnostic procedures

To be used only in conjunction with the  
PAXgene Bone Marrow RNA Kit (30) (Cat. No. 764133)

**REF** 764114

**STERILE R**



## I. Intended Use

The PAXgene® Bone Marrow RNA System consists of a bone marrow collection tube (PAXgene Bone Marrow RNA Tube) and nucleic acid preparation kit (PAXgene Bone Marrow RNA Kit). It is intended for the collection, storage, and transport of human bone marrow and stabilization of intracellular RNA in a closed tube and subsequent isolation and purification of total RNA.

### Product Features

PAXgene Bone Marrow RNA Tube 764114	2.0 mL • 16 x 125 mm Plus • BD Hemogard™	11.1 mL additive 50 tubes/case	Sterile RUO
----------------------------------------	---------------------------------------------	-----------------------------------	----------------

For Research Use Only. Not For Use In Diagnostic Procedures. No claim or representation is intended to provide information for the diagnosis, prevention, or treatment of a disease. The performance characteristics of this product have not been fully established.

Do Not Use For Blood Collection.

## II. Summary and Explanation

The aspiration and collection of whole bone marrow is the first step in many molecular assays used to study intracellular RNA. A major challenge in this type of testing is the instability of intracellular RNA, which rapidly degrades within hours after bone marrow aspiration. Furthermore, the expression of certain species of RNA, through the process of gene induction, increases in vitro after bone marrow collection. Both in vitro RNA degradation and gene induction can lead to an under- or overestimation of in vivo gene transcript number.

PAXgene Bone Marrow RNA Tubes contain an additive that stabilizes the in vivo gene transcription profile by reducing in vitro RNA degradation and minimizing gene induction. When used in conjunction with the PAXgene Bone Marrow RNA Kit, the PAXgene Bone Marrow RNA Tube provides stabilization and purification of intracellular RNA for accurate detection and quantification of gene transcripts.

## III. Specimen Collection and Preparation for Analysis

1. Label PAXgene Bone Marrow RNA Tube appropriately with subject identification.
2. Aspirate bone marrow using standard medical practices. Collect the bone marrow in a syringe with a standard anticoagulant (not supplied).
3. Remove the needle from the syringe used to collect bone marrow. Remove the BD Hemogard Closure from the PAXgene Bone Marrow RNA Tube as stated in Section VII. Add 2.0 mL bone marrow to the labeled PAXgene Bone Marrow RNA Tube as soon as possible after bone marrow aspiration. Use the gradations on the syringe to measure the amount of bone marrow. Alternatively, transfer the bone marrow to a secondary tube and pipet 2.0 mL bone marrow into the PAXgene Bone Marrow RNA Tube.

**Note:** Use of greater than 2.0 mL will interfere with the stabilization properties of the PAXgene Bone Marrow RNA Tube, leading to reduced RNA yields and degraded RNA. Use of less than 2.0 mL can lead to incorrect analytical results or poor product performance.

**Note:** The bone marrow sample is subject to RNA degradation and changes in gene expression until the bone marrow is transferred into the PAXgene Bone Marrow RNA Tube. To reduce changes of transcript levels that occur within minutes of aspiration, reduce as much as possible the time between bone marrow aspiration and transfer to the PAXgene Bone Marrow RNA Tube.

4. Close the PAXgene Bone Marrow RNA Tube with the original BD Hemogard Closure as stated in Section VIII. To close the tube, replace closure over tube. Next, twist and push down firmly until stopper is fully resealed. Complete reinsertion of the stopper is necessary for the closure to remain securely on the tube and prevent leakage during handling.
5. Immediately after bone marrow transfer and recapping, secure closure with thumb while holding tube in one hand, and mix the tube contents vigorously by powerfully inverting the PAXgene Bone Marrow RNA Tube 8–10 times.

**Note:** For sufficient RNA stabilization, it is important to mix bone marrow and tube solution completely. Some anticoagulants (e.g., lithium heparin) are known to complicate efficient mixing if tubes are only gently inverted.

6. Store the PAXgene Bone Marrow RNA Tube upright at room temperature (18–25°C) for a minimum of 2 hours before processing or transferring to refrigerator (2–8°C) or freezer (–20°C). Bone Marrow samples filled in PAXgene Bone Marrow RNA Tubes are stable at room temperature (18–25°C), refrigerated (2–8°C), or frozen (–20°C / –70°C).
  - Stand the PAXgene Bone Marrow RNA Tubes upright in a wire rack. Do not use a polystyrene foam tray as this may cause tubes to crack during freezing.
  - If PAXgene Bone Marrow RNA Tubes are to be stored at temperatures lower than –20°C, freeze them first for 24 hours at –20°C, then transfer them to –70°C.
  - Frozen PAXgene Bone Marrow RNA Tubes are subject to breakage upon impact. To reduce the risk of breakage during transport, frozen tubes should be treated in the same manner as glass tubes. Users must validate their own freezing and shipping protocol for PAXgene Bone Marrow RNA Tubes.

**Note:** Currently available data shows stabilization of intracellular RNA for 13 months at –20°C. For more information from ongoing studies evaluating stability for longer time periods or at other temperatures, please contact QIAGEN Technical Services (techservice-eu@qiagen.com).

#### Procedure for Specimen Preparation for Analysis

Bone marrow samples must be processed according to the instructions provided with the PAXgene Bone Marrow RNA Kit (Cat. No. 764133).

#### IV. Limitations of System

1. The PAXgene Bone Marrow RNA System (Tube and RNA Preparation Kit) is for research use only, the use of this product for diagnostic procedures and patient management is strictly prohibited. Neither the clinical utility nor the performance of the PAXgene Bone Marrow RNA Tube and Kit as part of an in vitro diagnostic procedure have been established.
2. Bone marrow samples obtained with the PAXgene Bone Marrow RNA Tube should be prepared only with the PAXgene Bone Marrow RNA Kit (Cat. No. 764133).
3. Over-filling or under-filling of tubes will result in an incorrect bone marrow-to-additive ratio and may lead to incorrect analytic results or poor product performance.
4. Endotoxin not controlled. Bone marrow and bone marrow components collected and processed in the tube are not intended for infusion or introduction into the human body.

#### V. Warnings and Precautions

1. Contents of this tube may cause irritation to eyes, respiratory system and skin.
  - After inhalation, supply fresh air, and seek medical advice in case of complaints.
  - After skin contact, immediately wash with water and soap and rinse thoroughly.
  - After eye contact, rinse immediately with plenty of water for at least 15 minutes and seek medical advice.
  - After swallowing, immediately seek medical advice.
2. Practice Universal Precautions. Use gloves, gowns, eye protection, other personal protective equipment, and engineering controls to protect from bone marrow splatter, bone marrow leakage, and potential exposure to blood borne pathogens.
3. Handle all biologic samples and bone marrow aspiration devices (e.g., syringes or other collection devices) according to the policies and procedures of your facility. Obtain appropriate medical attention in the event of any exposure to biologic samples (for example, through a puncture injury), since they may transmit viral hepatitis, HIV, or other infectious diseases. Utilize any built-in used-needle protector, if the aspiration device provides one. PreAnalytiX does not recommend re-shielding used needles; however, the policies and procedures of your facility may differ and must always be followed.

- Discard all bone marrow collection tubes and accessories in biohazard containers approved for disposal.
- Do not draw blood using the PAXgene Bone Marrow RNA Tube.
- Do not reuse PAXgene Bone Marrow RNA Tubes.
- Do not transfer a sample from a syringe to a tube through the stopper.
- Excessive centrifugation speed (over 10,000 RCF) may cause PAXgene Bone Marrow RNA Tube breakage, exposure to bone marrow and possible injury.

#### Danger



**Contains:** Tetradecyltrimethylammonium oxalate, tartaric acid

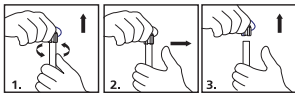
**H315** Causes skin irritation. **H318** Causes serious eye damage. **H317** May cause an allergic skin reaction. **H411** Toxic to aquatic life with long lasting effects.

**P261** Avoid breathing dust/fume/gas/mist/vapors/spray. **P264** Wash face, hands and any exposed skin thoroughly after handling. **P273** Avoid release to the environment. **P280** Wear protective gloves/protective clothing/eye protection/face protection. **P302+P352** IF ON SKIN Wash with plenty of soap and water. **P333+P313** If skin irritation or rash occurs: Get medical advice/attention. **P362+P364** Take off contaminated clothing and wash it before reuse. **P305+P351+P338** IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. **P310** Immediately call a POISON CENTER or doctor/ physician. **P391** Collect spillage. **P501** Dispose of contents/container to an approved facility in accordance with local, regional, national and international regulations.

#### VI. Storage

Store the unused PAXgene Bone Marrow RNA Tubes at 4–25°C.

#### VII. Instructions for Removal of BD Hemogard Closure

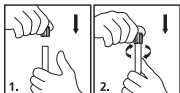


- Grasp the PAXgene Bone Marrow RNA Tube with one hand, placing the thumb under the BD Hemogard Closure (for added stability, place arm on solid surface). With the other hand, twist the BD Hemogard Closure while simultaneously pushing up with the thumb

of the other hand ONLY UNTIL THE TUBE STOPPER IS LOOSENED.

- Move thumb away before lifting closure. DO NOT use thumb to push closure off tube. Caution: If the tube contains blood, an exposure hazard exists. To help prevent injury during closure removal, it is important that the thumb used to push upward on the closure is removed from contact with the tube as soon as the BD Hemogard Closure is loosened.
- Lift closure off tube. In the unlikely event of the plastic shield separating from the rubber stopper, DO NOT REASSEMBLE CLOSURE. Carefully remove rubber stopper from tube.

## VIII. Instructions for Reinsertion of BD Hemogard Closure



1. Replace closure over tube.
2. Twist and push down firmly until stopper is fully resealed. Complete reinsertion of the stopper is necessary for the closure to remain securely on the tube during handling.

## IX. Technical Assistance

If you have any questions regarding the PAXgene Bone Marrow RNA System, contact one of the QIAGEN Technical Services Departments listed in the QIAGEN – Customer Service section.

## X. Ordering Information

### PAXgene Products

#### PAXgene Bone Marrow RNA Tubes (50) / 764114

Contents: 50 Bone Marrow Collection Tubes.

Use in conjunction with the PAXgene Bone Marrow RNA Kit (30).

#### PAXgene Bone Marrow RNA Kit (30) / 764133

Content: 30 PAXgene RNA Spin Columns, 30 PAXgene Shredder Spin Columns, Processing Tubes, RNase-free DNase-I, RNase-free Reagents and Buffers.

Use in conjunction with the PAXgene Bone Marrow RNA Tubes (50).

### QIAGEN – Customer Service

#### Argentina, Uruguay, and Paraguay

Orders: 0800.444.5523

E-mail: [crc\\_argentina@bd.com](mailto:crc_argentina@bd.com)

#### Australia

Orders: 1.800.656.100

Fax: 1.800.656.110

E-mail: [bd\\_anz@bd.com](mailto:bd_anz@bd.com)

#### Austria

Orders: 43.1.7063660

Fax: 43.1.706366011

E-mail: [customer-care.at@bd.com](mailto:customer-care.at@bd.com)

#### Belgium

Orders: 32.53.720.556

Fax: 32.53.720.549

E-mail: [orders.be@bd.com](mailto:orders.be@bd.com)

#### Brazil

Orders: 0800.055.56.54

E-mail:

[consultoria\\_vacutainer@bd.com](mailto:consultoria_vacutainer@bd.com)

#### Canada

Technical support: 1.800.631.0174

Orders: 1.866.979.9408

Fax: 1.800.565.0897

E-mail:

[customer.service.canada@bd.com](mailto:customer.service.canada@bd.com)

#### Central and Eastern Europe

Orders: 48.22.377.11.11

Fax: 48.22.377.11.02

Bulgaria orders:

[info\\_bulgaria@bd.com](mailto:info_bulgaria@bd.com)

Czech Republic orders: [info\\_czech@bd.com](mailto:info_czech@bd.com)

Croatia orders:

[info\\_croatia@bd.com](mailto:info_croatia@bd.com)

Hungary orders:

[info\\_hungary@bd.com](mailto:info_hungary@bd.com)

Poland orders: [info\\_poland@bd.com](mailto:info_poland@bd.com)

Romania orders:

[info\\_romania@bd.com](mailto:info_romania@bd.com)

Southeast Europe orders:

[info\\_balkan@bd.com](mailto:info_balkan@bd.com)

Serbia orders: [info\\_serbia@bd.com](mailto:info_serbia@bd.com)

Slovakia orders:

[info\\_slovakia@bd.com](mailto:info_slovakia@bd.com)

Slovenia orders:

[info\\_slovenia@bd.com](mailto:info_slovenia@bd.com)

#### Denmark

Orders: 45.43.43.45.66

Fax: 45.43.96.56.76

Orders: [ordre.dk@bd.com](mailto:ordre.dk@bd.com)

Technical support:

[bddenmark@bd.com](mailto:bddenmark@bd.com)

**Finland**

Orders: 358.9.88.70.780  
Fax: 358.9.88.70.7816  
Orders: tilaukset.fi@bd.com  
E-mail: bdsuomi@bd.com

**France**

Orders: 33.476.68.36.36  
Fax: 33.476.68.36.93  
E-mail: serviceclientbdf@bd.com  
Orders: commandesfr@bd.com  
Technical support:  
vacutainerfr@bd.com

**Germany**

Orders: 49.6221.3050  
Fax: 49.6221.305.216  
E-mail: customercare.de@bd.com

**India**

Orders: 91.124.3949390  
Orders: bd\_india@bd.com

**Ireland**

**(Aquilant Specialist Healthcare Services)**  
Customer support: 353.1.404.8350  
Fax: 353.1.404.8352  
E-mail:  
contactus@aquilantscientific.ie

**Israel (Lapidot Medical)**

Customer support: 972.700.70.90.22  
E-mail: cs@lapidot.com

**Italy**

Orders: 39.02.48240.500  
Fax: 39.02.48240.775  
Technical support: 39.3450655140  
E-mail: ordini.it@bd.com

**Middle East & Africa**

Orders: 971.45.592.555  
Fax: 971.45.592.599  
E-mail: EMA\_PAS@bd.com

**The Netherlands**

Orders: 31.20.582.94.20  
Fax: 31.20.582.94.21  
Orders: orders.nl@bd.com

**New Zealand**

Orders: 0800.572.468  
Fax: 0800.572.469  
E-mail: nz\_customerservice@bd.com

**Norway**

Customer support: 64.00.99.00  
E-mail: bdnorge@bd.com  
Orders: ordre.no@bd.com

**Southeast Asia**

Customer support: www.bd.com/en-sea/support  
E-mail: bd\_sea@bd.com  
Indonesia orders: 622.1577.1920  
Malaysia orders: 603.2093.8788  
Philippines orders: 63.2478.8881  
Singapore orders: 65.6861.0633  
Thailand orders: 662.646.1800  
Vietnam orders: 848.3822.7409

**South Korea**

Orders: 080.340.3800  
Fax: 02.3404.3785  
Technical: 080.340.3800  
Technical support: service\_korea@bd.com

**Spain, Portugal, and Andorra**

Orders: 34.91.848.8174  
Customer support: 34.902.27.17.27  
Fax: 34.91.848.8115  
E-mail: info.spain@bd.com

**Sweden**

Orders: 46.8.775.51.00  
Fax: 46.8.645.08.08  
Orders: order.se@bd.com  
Technical support:  
bdsweden@bd.com

**Switzerland**

Orders: 41.61.485.22.24  
Fax: 41.61.485.22.00  
E-mail: infoch@bd.com

**UK**

Orders: 0800.917.8776  
E-mail:  
bduk\_customerservice@bd.com












**USA**

Customer support: 800.631.0174  
or www.bd.com.  
E-mail: productcomplaints@bd.com

### Change History

Revision	Date	Change Summary
01	2015-12	First issue (previous version: VD1750041[02]). Updated Warnings and Precautions in Section V. Added endotoxin limitation (4.) in Section IV. Added Technical Assistance Section IX. Updated BD and QIAGEN customer contact information in Section X. Updated Symbol and Mark Key.
02	2016-01	Updated formatting.
03	2023-10	Updated PreAnalytiX GmbH street address. Added STERILE R, Single sterile barrier system symbol, Temperature limit symbol 4 to 25°C, Caution, Do not re-use, Do not use if package is damaged, Keep dry, Keep away from sunlight, Consult instructions for use symbol. Updated GHS pictograms, signal word, all Hazard and Precautionary statements added. Updated customer service information. Updated formatting and Symbols Glossary. Updated trademark information.

### Symbol and Mark Key

Symbol	Meaning
	Manufacturer
	Catalogue number
	Sterilized using irradiation
	Do not use if package is damaged and consult instructions for use
	Keep away from sunlight
	Keep dry
	Temperature limit
	Do not re-use
	Consult instructions for use or consult electronic instructions for use
	Caution
	Single sterile barrier system



PreAnalytiX GmbH  
Garstigweg 8  
8634 Hombrechtikon  
Switzerland

The PAXgene Bone Marrow RNA Tube is made in the UK by BD for PreAnalytiX GmbH.

Hemogard™ and Vacutainer® are trademarks of Becton, Dickinson and Company or its affiliates; QIAGEN® is a trademark of QIAGEN NV. Unless otherwise noted, PreAnalytiX, the PreAnalytiX Logo and all other trademarks are property of PreAnalytiX GmbH, Hombrechtikon, Switzerland.

© 2023 PreAnalytiX GmbH.

2023-10  
VDP40227(03)  
500069293