

# QIAamp® Virus BioRobot® Kits

For automated purification of viral DNA and RNA from cell-free body fluids

- Rapid isolation of high-quality, ready-to-use viral DNA and RNA
- No organic extraction or alcohol precipitation
- Consistent, high yields
- Complete removal of contaminants and inhibitors
- Flexibility with 24- or 96-well plates or multiple sample types

## Rapid automated purification of viral DNA and RNA

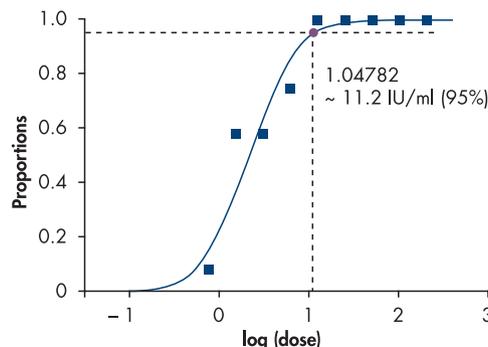
The QIAamp Virus BioRobot MDx Kit provides automated viral nucleic acid purification on the BioRobot MDx using proven QIAamp technology. The fully automated procedure requires less than 2.5 hours, including bar code reading and complete process documentation, with no hands-on time during the run.

## Efficient removal of inhibitors for sensitive detection

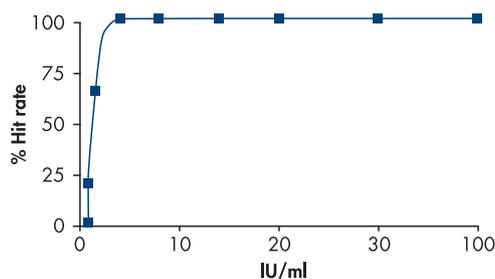
Contaminants and inhibitors are efficiently removed using robust QIAamp technology, enabling sensitive detection in downstream PCR (Figures 1 and 2). Precision pipetting by the BioRobot MDx workstation minimizes the risk of cross-contamination (Figure 3).

	1	2	3	4	5	6	7	8	9	10	11	12
A	Neg.	26.10	Neg.	25.87	Neg.	25.78	Neg.	25.77	Neg.	25.49	Neg.	26.07
B	26.06	Neg.	27.03	Neg.	25.65	Neg.	26.08	Neg.	25.84	Neg.	25.92	Neg.
C	Neg.	25.52	Neg.	27.73	Neg.	25.65	Neg.	26.23	Neg.	26.25	Neg.	27.03
D	25.91	Neg.	27.23	Neg.	26.90	Neg.	27.20	Neg.	26.42	Neg.	27.51	Neg.
E	Neg.	26.25	Neg.	27.83	Neg.	27.33	Neg.	26.41	Neg.	27.02	Neg.	27.22
F	26.98	Neg.	25.89	Neg.	25.99	Neg.	27.96	Neg.	26.58	Neg.	27.34	Neg.
G	Neg.	27.18	Neg.	27.18	Neg.	27.21	Neg.	26.70	Neg.	26.22	Neg.	27.48
H	26.05	Neg.	26.51	Neg.	26.24	Neg.	26.80	Neg.	26.28	Neg.	27.21	Neg.

**Figure 3. No cross-contamination detected with high viral loads.** Forty-eight RNA-virus-positive plasma samples with a viral load of 10<sup>6</sup> IU/ml and 48 RNA-virus-negative plasma samples were processed in a checkerboard pattern on the BioRobot MDx with the QIAamp Virus BioRobot MDx Kit. Eluates were amplified using a real-time RT-PCR assay. No cross-contamination of negative samples was observed over three separate runs (one run shown). Positive represents samples that were PCR-positive and had amplification threshold cycles of 25–27. Negative indicates that no PCR products were detected after 45 cycles of PCR.

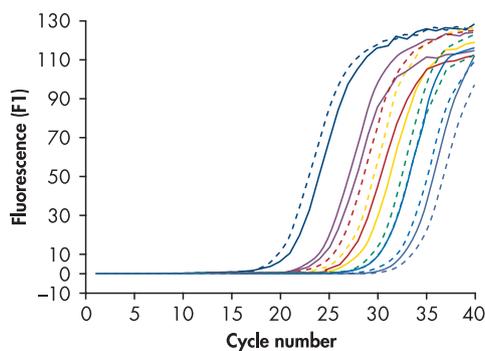


**Figure 1. Highly sensitive detection of HBV DNA.** An HBV standard was diluted in EDTA plasma at different titers. Viral nucleic acids were purified in 24-fold replicates using the QIAamp Virus BioRobot MDx Kit on the BioRobot MDx workstation. HBV DNA was amplified and detected using the artus® HBV TM PCR Kit on the Applied Biosystems 7500 Real-Time PCR System. HBV DNA was detected with a 95% probit value (vertical dashed line) of 11.2 IU/ml.



**Figure 2. Highly sensitive detection of an RNA virus.** RNA from a typical RNA virus (international standard) was purified using the QIAamp Virus BioRobot MDx Kit and detected using a commercially available kit. The 95% hit rate was 6.97 IU/ml with a confidence interval of 5.4–11.8.



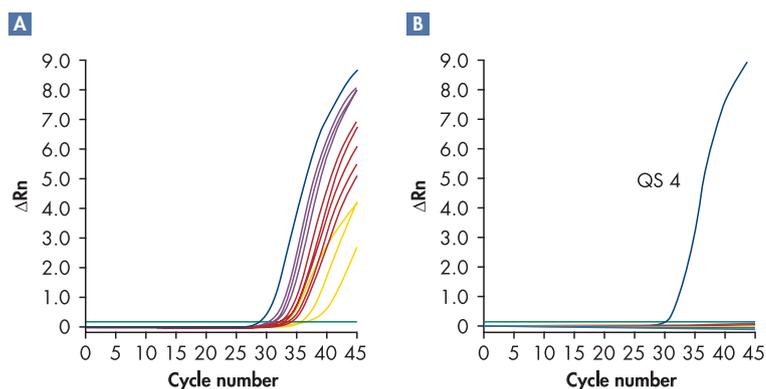


**Figure 4. Reliable purification of EBV DNA from cells.** Viral DNA was purified from serial dilutions of EBV-infected Raji cells (50,000–10 cells/ml) using the QIAamp One-For-All Nucleic Acid Kit on the BioRobot MDx. Purified viral DNA was analyzed by quantitative real-time PCR. (Data kindly provided by M.J. Bankowski, S.W. Belzer, B.D. Lembke, and S.M. Anderson, ViroMed [LabCorp] Laboratories, Minnetonka, MN, USA.)

## Flexible kit formats

The QIAamp 24 Virus BioRobot Kit provides flexibility for lower throughputs, without the need to partially seal and reuse 96-well plates. The performance is comparable to that of the QIAamp Virus BioRobot MDx Kit.

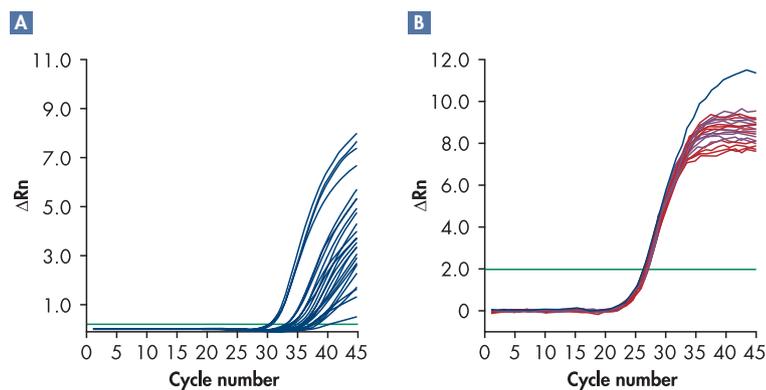
The QIAamp One-For-All Nucleic Acid Kit enables purification of RNA and DNA from different samples (e.g., viral RNA and DNA from serum, genomic DNA from blood) in the same run. The kit can be used for a wide range of sample types, including, for example, cells (Figure 4) and whole blood (Figure 5).



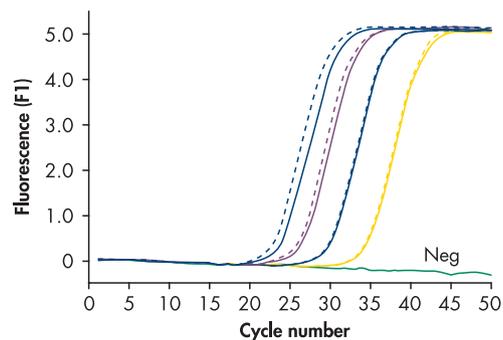
**Figure 5. Efficient purification of viral DNA from whole blood using the QIAamp One-For-All Nucleic Acid Kit.** Viral DNA was purified from a QCMD panel of CMV-positive whole blood samples and a set of negative human samples using the QIAamp One-For-All Nucleic Acid Kit on the BioRobot MDx. **A** All QCMD samples were identified correctly by quantitative real-time PCR. (Negative samples QCMD 05-03 and 05-08 tested negative, as expected.) **B** All negative human samples tested negative. **QS4**: positive control (quantitation standard).

## Consistent, high yields

QIAamp Virus BioRobot Kits provide consistent high yields of viral nucleic acids over a wide range of viral loads (Figure 6). Automation on the BioRobot MDx workstation provides a high degree of standardization for consistent, repeatable results (Figure 7).



**Figure 6. Reliable purification of viral DNA over a range of viral loads.** Viral DNA was purified from serial dilutions (2000 copies/ml to 50 copies/ml) of CMV-positive sample QCMD 05-07 using the QIAamp One-For-All Nucleic Acid Kit on the BioRobot MDx. **A** Viral DNA was analyzed by quantitative real-time PCR. The limit of detection was lower than the lowest dilution (<50 copies/ml). **B** Internal control signals for all samples demonstrate efficient DNA recovery for all samples.



**Figure 7. Repeatable purification of viral nucleic acids.** Viral DNA was purified from serial dilutions of adenovirus using the QIAamp One-For-All Nucleic Acid Kit on the BioRobot MDx on 2 different days. Purified viral DNA was analyzed by quantitative real-time PCR. Results from both days were comparable, demonstrating consistent yields. **Neg**: negative control. (Data kindly provided by M.J. Bankowski, S.W. Belzer, B.D. Lembke, and S.M. Anderson, ViroMed [LabCorp] Laboratories, Minnetonka, MN, USA.)

## Highly pure viral DNA and RNA for a wide range of applications

The purified DNA and RNA can be used in a wide range of downstream applications, including:

- PCR and quantitative real-time RT-PCR
- Infectious disease research

## Ordering Information

Product	Contents	Cat. no.
QIAamp Virus BioRobot MDx Kit (12)	For 12 x 96 preps on the BioRobot MDx: 12 QIAamp 96 Plates, RNase-Free Buffers,* QIAGEN Protease, Elution Microtubes CL, Caps, S-Blocks, Carrier RNA	965652
QIAamp 24 Virus BioRobot Kit (12)	For 12 x 24 preps on the BioRobot MDx: 12 QIAamp 24 Plates, RNase-Free Buffers,* QIAGEN Protease, Elution Microtubes CL, Caps, S-Blocks, Carrier RNA	965612
QIAamp One-For-All Nucleic Acid Kit (12)	For 12 x 96 preps on the BioRobot MDx: 12 QIAamp 96 Plates, RNase-Free Buffers,* QIAGEN Protease, Elution Microtubes CL, Caps, S-Blocks, Carrier RNA	965672
QIAamp Virus BioRobot 9604 Kit (12)	For 12 x 96 preps on the BioRobot 9604:† 12 QIAamp 96 Plates, RNase-Free Buffers, QIAGEN Protease, AirPore Tape Sheets, Tape Pad, S-Blocks, Racks with Collection Microtubes (1.2 ml), Carrier RNA, Caps	965662

\* Wash buffers are labeled with bar codes, and expiration date is stated on the Q-Card in the kit.

† The BioRobot 9604 workstation is no longer available.

QIAamp Virus BioRobot Kits are intended for general laboratory use. The BioRobot MDx is intended for laboratory use. No claim or representation is intended to provide information for the diagnosis, prevention, or treatment of a disease.

The BioRobot 9604 is intended for molecular biology applications. This product is neither intended for the diagnosis, prevention, or treatment of a disease, nor has it been validated for such use either alone or in combination with other products.

The *artus* HBV TM PCR Kit is intended for in-vitro diagnostic use in Europe and not for sale in the US. The *artus* HBV TM PCR Kit is not available for clinical use in the USA.

**Discover our full range of automated solutions at [www.qiagen.com/automation](http://www.qiagen.com/automation) !**

Trademarks: QIAGEN®, QIAamp®, *artus*®, BioRobot® (QIAGEN Group).  
1053586 07/2008 © 2008 QIAGEN, all rights reserved.

### www.qiagen.com

**Australia** ■ 1-800-243-800  
**Austria** ■ 0800/28 1010  
**Belgium** ■ 0800-79612  
**Canada** ■ 800-572-9613  
**China** ■ 0086-21-3865-3865  
**Denmark** ■ 80-885945  
**Finland** ■ 0800-914416

**France** ■ 01-60-920-930  
**Germany** ■ 02103-29-12000  
**Hong Kong** ■ 800 933 965  
**Ireland** ■ 1800 555 049  
**Italy** ■ 800 787980  
**Japan** ■ 03-5547-0811  
**Korea (South)** ■ 1544 7145  
**Luxembourg** ■ 8002 2076

**The Netherlands** ■ 0800 0229592  
**Norway** ■ 800-18859  
**Singapore** ■ 65-67775366  
**Spain** ■ 91-630-7050  
**Sweden** ■ 020-790282  
**Switzerland** ■ 055-254-22-11  
**UK** ■ 01293-422-911  
**USA** ■ 800-426-8157

