

Instructions for use

# BKV — ELITe Positive Control

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plasmid DNA control for quantitative assay



**REF** CTR175PLD

**UDI** 08033891483555

**CE** **IVD**  
0123

## CHANGE HISTORY

Rev.	Notice of change	Date (dd/mm/yy)						
14-R	<p>Update for compliance with the Regulation (EU) 2017/746 on in vitro diagnostic medical devices (IVDR) requirements .</p> <p>Update of the Intended use:</p> <ul style="list-style-type: none"> <li>• Validation of the products in association with ELITe InGenius (REF INT030) and ELITe BeGenius (REF INT040) instruments</li> <li>• Validation of the products in association with the ABI 7500 Fast Dx Real-Time PCR Instrument.</li> </ul> <p style="text-align: center;"><b>NOTE</b></p> <p>Composition of the product remains unchanged</p> <p style="text-align: center;"><b>NOTE</b></p> <p>The following product batches are still placed on the market as per IVDD till to their expiration dates, according to Article 110 of IVDR. If you have these product batches, please contact ELITechGroup staff to request the related previous version of IFUs</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">PRODUCT REF.</th> <th style="text-align: center;">Lot Number</th> <th style="text-align: center;">Expiry date</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">CTR175PLD</td> <td style="text-align: center;">U0124-040</td> <td style="text-align: center;">31/01/2026</td> </tr> </tbody> </table> <p>New graphics and content setting of the IFU.</p>	PRODUCT REF.	Lot Number	Expiry date	CTR175PLD	U0124-040	31/01/2026	26/09/24
PRODUCT REF.	Lot Number	Expiry date						
CTR175PLD	U0124-040	31/01/2026						
13	Extended Use of the product in association with «ELITe BeGenius®» instrument (REF INT040)	22/10/21						
12	Extended Use of the product with the platform <i>Roche cobas z 480 analyzer</i> .	25/01/21						
11	The volume of positive control passed from 4 x 65 µL to 2 x 160 µL	07/04/17						
00-10	New product development and succeeding changes	-						

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## 1 INTENDED USE

The product **BKV — ELITe Positive Control** is an *in vitro* diagnostic medical device intended to be used by healthcare professionals as known quantity DNA positive control in nucleic acids Real-Time PCR assays for the detection and quantification of the DNA of human Polyomavirus BK (BKV) in association with **BKV ELITe MGB® Kit** and **ELITe InGenius®**, **ELITe BeGenius®** and **7500 Fast Dx Real-Time PCR Instruments**.

## 2 PRODUCT DESCRIPTION

The product supplies the **BKV — Positive Control**, a plasmid DNA at known titre\* in a stabilizing solution based on Tris-HCl and EDTA, aliquoted into **two ready- to use test tubes**.

The plasmid DNA contains a region of the gene codifying the **Large T antigen** of BKV. The detection and quantification of target DNA using **BKV ELITe MGB Kit** product in association with **ELITe InGenius** and **ELITe BeGenius** instruments, attests the system ability to detect the DNA of the target gene and consequently the verification of the system. The detection of target DNA using **BKV ELITe MGB Kit** product in association with **7500 Fast Dx Real-Time PCR** instrument attests the system ability to detect the DNA of the target gene and consequently the verification of the session.

The product contains sufficient reagents for **8 separate sessions** on **ELITe InGenius** and **ELITe BeGenius**, **12 separate sessions** on the other systems, with 20 µL used per reaction.

### NOTE

Standard DNA concentration was determined by spectrophotometer by absorbance measurement of the plasmid DNA preparation. This standard DNA was related to the "1st WHO International Standard for BK Virus DNA" (NIBSC, code 14/212, United Kingdom) with a conversion factor to International Unit as reported in instruction for use of the **BKV ELITe MGB Kit** product.

## 3 MATERIALS PROVIDED IN THE PRODUCT

Table 1

Component	Description	Quantity	Classification of Hazards
<b>BKV — Positive Control</b> ref. CTR175PLD	plasmid DNA solution in tube with <b>NATURAL</b> cap	<b>2 x 160 µL</b>	-

## 4 MATERIALS REQUIRED BUT NOT PROVIDED IN THE PRODUCT

- Laminar airflow hood.
- Disposable powderless nitrile gloves or similar material.
- Vortex mixer.
- Bench microcentrifuge (~13,000 RPM).
- Micropipettes and sterile tips with aerosol filter or sterile positive displacement tips (2-20 µL, 5-50 µL, 50-200 µL).
- Molecular biology grade water.

## 5 OTHER PRODUCTS REQUIRED

The reagents for Real-Time amplification and the consumables **are not** included in this product.

To perform the assay the following products are required:

Table 2

Instruments and softwares	Products and reagents
<b>ELITe InGenius</b> (ELITechGroup S.p.A., EG SpA, ref. INT030) <b>ELITe InGenius Software</b> version 1.3.0.19 (or later) <b>BKV ELITe_PC</b> , Assay Protocol with parameters for Positive Control analysis.	<b>BKV ELITe MGB Kit</b> (EG SpA, ref. RTS175PLD) <b>ELITe InGenius PCR Cassette</b> (EG SpA, ref. INT035PCR) <b>300 µL Filter Tips Axygen</b> (Corning Life Sciences Inc., ref. TF-350-L-R-S) with ELITe InGenius only <b>1000 µL Filter Tips Tecan</b> (Tecan, Switzerland, ref. 30180118) with ELITe BeGenius only <b>ELITe InGenius Waste Box</b> (EG SpA, ref. F2102-000)
<b>ELITe BeGenius</b> (EG SpA, ref. INT040) <b>ELITe BeGenius Software</b> version 2.2.1 (or later) <b>BKV ELITe_Be_PC</b> , Assay Protocol with parameters for Positive Control analysis.	
<b>7500 Fast Dx Real-Time PCR Instrument</b> (ThermoFisher Scientific, ref. 4406985) <b>ELITe GALAXY</b> (EG SpA, ref. INT020)	<b>BKV ELITe MGB Kit</b> (EG SpA, ref. RTS175PLD) <b>MicroAmp™ Fast Optical 96-Well Reaction Plate with Barcode, 0.1 mL</b> (Life Technologies, ref. 4346906), microplates with 0.1 mL wells and adhesive sealing sheets for real time amplification.

## 6 WARNINGS AND PRECAUTIONS

This product is designed for *in-vitro* use only.

### 6.1 General warnings and precautions

- Handle and dispose of all reagents and all materials used to carry out the assay as if they were infectious. Avoid direct contact with the reagents. Avoid splashing or spraying. Waste must be handled and disposed of in compliance with adequate safety standards. Disposable combustible material must be incinerated. Liquid waste containing acids or bases must be neutralized before disposal.
- Wear suitable protective clothes and gloves and protect eyes and face.
- Never pipette solutions by mouth.
- Do not eat, drink, smoke or apply cosmetic products in the work areas.
- Carefully wash hands after handling samples and reagents.
- Dispose of leftover reagents and waste in compliance with the regulations in force.
- Carefully read all the instructions provided before running the assay.
- While running the assay, follow the product instructions provided.
- Do not use the product after the indicated expiry date.
- Only use the reagents provided with the product and those recommended by the manufacturer.
- Do not use reagents from different batches.
- Do not use reagents from other manufacturers.

### 6.2 Warnings and precautions for molecular biology

Molecular biology procedures require qualified and trained staff to avoid the risk of erroneous results, especially due to sample nucleic acids degradation or sample contamination by PCR products.

When the amplification session has to be performed with the 7500 Fast Dx Real-Time PCR Instrument, it is necessary to have available separate areas for the extraction / preparation of amplification reactions and for the amplification / detection of amplification products. Never introduce an amplification product in the area designated for extraction / preparation of amplification reactions.

Laboratory coats, gloves and tools dedicated to work session setup are needed.

The reagents must be handled under a laminar airflow hood. The pipettes used to handle the reagents must be exclusively used for this purpose. The pipettes must be of the positive displacement type or be used with aerosol filter tips. The tips used must be sterile, free from DNases and RNases, and free from DNA and RNA.

After the amplification session, the Reaction Plate and the PCR Cassette must be handled carefully and never opened to avoid PCR product diffusion into the environment and sample and reagent contamination.

### 6.3 Warnings and precautions specific for the components

Table 3

Component	Storage temperature	Use from first opening	Freeze / thaw cycles	On board stability (ELITE InGenius and ELITE BeGenius)
<b>BKV — Positive Control</b>	-20°C or below	one month	up to eight	up to four separate sessions* of three hours each

\* with intermediate freezing.

## 7 PROCEDURE

The product **BKV — ELITE Positive Control** must be used in association with the product **BKV ELITE MGB Kit**.

The component **BKV Positive Control** is ready for use: a volume of **20 µL** is directly added to the reaction mixture (**BKV Q-PCR Mix**, component of **BKV ELITE MGB Kit**) by the instrument.

Before use, take and thaw the **BKV — Positive Control** tube at room temperature (+16 / +26°C) for 30 minutes. Mix gently, spin down the content for 5 seconds and keep it on ice or in a cool block.

The complete assay procedure is described in detail in the instructions for use of the product **BKV ELITE MGB Kit**.

The performance characteristics and procedure limitations of the complete assay are described in detail in the instructions for use of the product **BKV ELITE MGB Kit**.

### NOTE

The results of the **BKV — ELITE Positive Control** will be stored by the ELITE InGenius and ELITE BeGenius instruments and used to set up the Control Charts monitoring the amplification step performances. For each lot of the product **BKV ELITE MGB Kit**, the amplification of Positive Control is required. The stored results of the Positive Control amplification will expire **after 15 days**

## 8 REFERENCES

P. Ferrante et al. (1995) *J. Med. Vir.* 47: 219 - 225

## 9 SYMBOLS



Catalogue Number.



Upper limit of temperature.



Batch code.



Use by (last day of month).



*in vitro* diagnostic medical device.



Fulfilling the requirements of the IVDR Regulation 2017/746/EC for *in vitro* diagnostic medical device. Certification released by TÜV SÜD Product Service GmbH, Germany.



Unique Device Identification



Contains sufficient for "N" tests.



Consult instructions for use.



Contents.



Manufacturer.

## 10 NOTICE TO THE USERS

Any serious incident that has occurred in relation to the device shall be reported to the manufacturer and the competent authority of the Member State in which the user and /or the patient is established. At the moment of the current revision of the IFU, no serious incident or recall with impact on product performance and safety of the device has occurred.

A "Summary of Safety and Performance" will be made available to the public via the European database on medical devices (Eudamed) when this informatic system will be functional. Before the notice of full functionality of Eudamed has been published, the "Summary of Safety and Performance" will be made available to the public upon request by email at [emd.support@elitechgroup.com](mailto:emd.support@elitechgroup.com), without undue delay.

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