

BK virus

- ▶▶ BK polyomavirus (BKV) is a small double-stranded DNA virus first described in 1971 that has emerged as an important cause of graft loss in renal transplant recipients. This ubiquitous virus, which is a member of the *Polyomaviridae* family, is commonly transmitted through respiratory secretions, resulting in a mild self-limited respiratory infection. Viral spread to other organs is believed to be via bloodstream and in immunocompetent individuals, it remains clinically silent in renal tubular epithelium.

BK virus has an estimated seroprevalence in the immunocompetent population of > 80%. It can be classified in 4 main BKV subtypes: I, II, III and IV, based on nucleotide variation of the *vp1* gene, which encodes for the viral capsid protein 1. These subtypes show different prevalence around the world, being the subtype I the prevalent in most geographical regions.

The clinical sequelae of BKV reactivation is confined to the immunocompromised state, such as in renal transplantation and hematopoietic stem cell transplantation (HSCT) patients. Under immunosuppression, latent viral reactivation can result in BKV-associated nephropathy (BKVAN) characterized by interstitial nephritis and/or urinary tract stenosis, affecting up to 10% of patients. This can cause allograft loss in up to 60% of affected kidney transplant recipients. In HSCT patients, BKV reactivation can present with haemorrhagic cystitis that can be associated with significant morbidity and mortality.

The diagnosis of BK virus infection is confirmed by demonstrating the presence of infectious virus or viral DNA in clinical samples (including blood and other body fluids) from infected patients. Renal biopsy (allograft) remains the gold standard for diagnosing "definite" BKVAN; however, this is time consuming, invasive, user-dependent and missed in up to a third of renal biopsies due to the focal nature of the infection, the tendency for early disease to involve the collecting tubules, and the elevated possibility of sampling error. **With increasing ease and availability of determination of the BK viral DNA quantitative value by polymerase chain reaction (qPCR), this has become the mainstay of BKV detection.**

- ▶▶ **VIASURE BK Virus q Real Time PCR Detection Kit** is designed for the detection and quantitative measurement of BKV DNA in human EDTA-plasma samples. After DNA isolation, the detection of BKV is performed by the amplification of a conserved region of the *vp1* gene, using specific primers and fluorescent-labelled probes.



"Ready & Easy-to-use" kits.
Lyophilised product



Transport and storage at **room temperature**.
Shelf-life: 24 months



Validated according to **ISO 13485**
and **CE marked**



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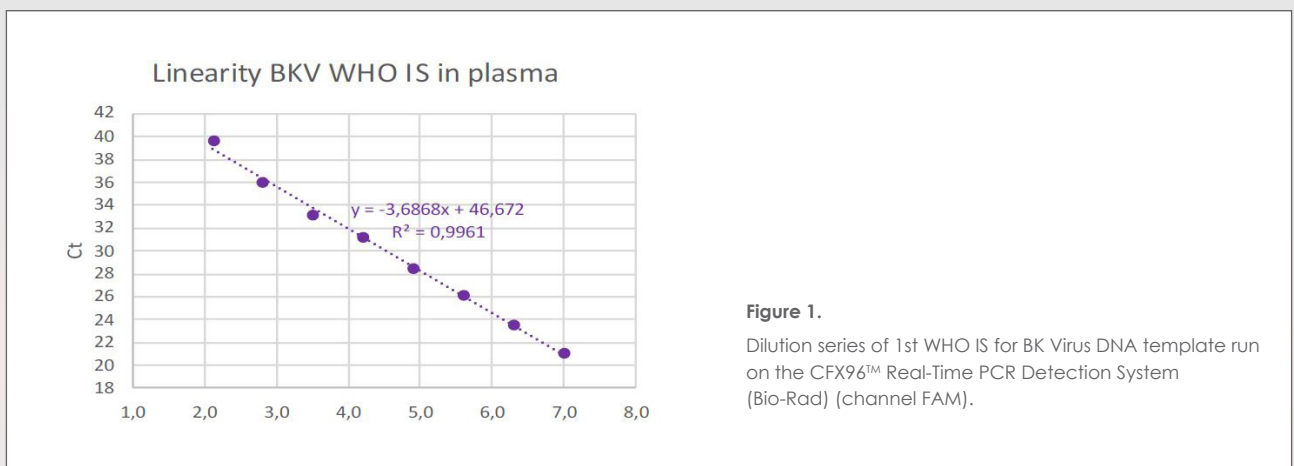
VIASURE BK Virus q Real Time PCR Detection Kit is a real-time PCR test designed for the detection and quantitative measurement of BK virus (BKV) DNA in human EDTA-plasma samples.

This test is intended for use as an aid in the universal screening of the BKV infection, in the diagnosis and management of BKV in solid organ transplant patients and in hematopoietic stem cell transplant patients. The test can be used in these populations to assess the need to initiate antiviral treatment, and in patients receiving anti-BKV therapy, serial DNA measurements can be used to assess viral response to treatment.

The results from the VIASURE BK Virus q Real Time PCR Detection Kit must be interpreted within the context of all relevant clinical and laboratory findings. DNA is extracted from clinical specimens, amplified using real-time PCR, and detected using fluorescent reporter dye probes specific for BKV.

Linear range

► Using **VIASURE BK Virus q Real Time PCR Detection Kit** amplifications in all dilutions tested were obtained. (Figure 1)



References - VIASURE BK Virus q Real Time PCR Detection Kit

6 x 8-well strips, low profile _____ VS-BKQ106L
 12 x 8-well strips, low profile _____ VS-BKQ112L
 96-well plate, low profile _____ VS-BKQ113L
 4 tubes x 24 reactions _____ VS-BKQ196T

6 x 8-well strips, high profile _____ VS-BKQ106H
 12 x 8-well strips, high profile _____ VS-BKQ112H
 96-well plate, high profile _____ VS-BKQ113H



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For more information and use procedure,
 read the instructions for use included in this product.

VIASURE/BKQ-0922EN

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