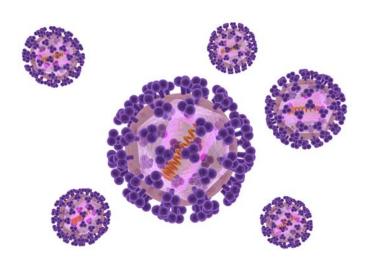
# Intellectual Property (Non-confidential)



## Polyomavirus Diagnostic Reagents



#### **DESCRIPTION**

Polyomaviruses are DNA-based, small, icosahedral in shape and do not have a lipoprotein envelope. They are potentially oncogenic (tumor-causing) and have been proven to cause BK nephropathy and hemorrhagic cystitis. They often persist as latent infections in a host without causing disease, but may produce tumors in a host of a different species, or a host with an ineffective immune system (e.g. immunosuppressed patients who have received a transplant or HIV positive patients). Accordingly, this technology allows for the diagnosis (through the assessment of the level of T-cell immunity to the viruses) and treatment (through vaccination) of human polyomavirus. This is accomplished

using peptides corresponding to HLA-A\*02-restricted cellular epitopes within the VP1 polypeptide of human polyomaviruses.

#### **KEY ASPECTS**

- The probes (tetramers, pentamers, or other multimeric complexes) made with peptides corresponding to the BK version of the epitope allow the detection of T-cells that recognize this epitope of the BK virus, and also allow the detection of T-cells that cross-recognize the JC version of the epitope
- For example, BKV tetramers can be used to assess immunity in the context of the primary human diseases caused by BKV: polyomavirus associated nephropathy (PVAN or BKVN) (renal transplant patients) and hemorrhagic cystitis (stem cell/bone marrow transplant recipients)
- Effective against BK virus
- Provides for probes that can be used to assay clinical samples for presence of these viruses

#### INTELLECTUAL PROPERTY

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Title	US Patent Number	Issued
Polyomaviruses Cellular Epitope and Uses Therefor	7,468,186	12/23/2008
Polyomavirus Diagnostic Reagents	7,662,912	2/23/2010

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