

## Quantiplus® HPV GENOTYPE DETECTION KIT (END POINT PCR)



**QL-HPVG-25** : 25rxns  
**QL-HPVG-50** : 50rxns  
**QL-HPVG-100** : 100 rxns

RUO

**PI/QLHPVG-00**

### Introduction & Product Description

Human Papilloma Virus (HPV) is a member of the Papilloma virus family of viruses that is capable of infecting humans. Like all Papilloma viruses, HPVs establish productive infections only in the stratified epithelium of the skin or mucous membranes. Approximately 13 HPV types have been classified as oncogenic, (genotypes 16, 18, 31, 33, 35, 39, 45, 51, 52, 56, 58, 59, 68) and an additional genotype (66) is classified as "limited evidence in humans". HPV types are categorized as low or high-risk based on their oncogenic potential. Low-risk HPV types are typically associated with genital warts, whereas high-risk (HR) types are associated with invasive cervical cancer. Of theHR (oncogenic) HPV types, HPV 16 causes more than 50% of cervical cancers and HPV 18 causes 10% to 20%. Quantiplus® HPV Genotype Detection PCR Kit is for detection of Human Papilloma Virus in vaginal swab/cervical brush and tissue samples.

### Kit components

Color Coding (Caps)	Contents	Description	25 rxns (QL-HPVG-25)	50 rxns (QL-HPVG-50)	100 rxns (QL-HPVG-100)
Blue	D core qPCR Mix (2X)	PCR mix includes DNA polymerase dNTP, MgCl <sub>2</sub> and buffer	1 x 325 µL	1 x 650 µL	2 x 650 µL
Natural	HPV Primer mix	HPV Forward and Reverse primer	1 X 40 µL	1 X 80 µL	2 X 80 µL
Natural	HPV Forward sequencing Primer	Primer	1 x 20 µL	1 x 40 µL	1 x 80 µL
Natural	HPV Reverse sequencing Primer	Primer	1 x 20 µL	1 x 40 µL	1 x 80 µL
White	Huwel PW	Purified water	1 x 500 µL	1 x 500 µL	1 x 500 µL

### Sample Type

Vaginal Swab/Cervical Brush, Tissue

### Assay Procedure:

#### DNA Extraction

S. No.	Name of the DNA Isolation Kit	Recommended Sample volume	Recommended Final Elution volume
1.	Huwel Nucleic Acid Extraction Kit (HL-NAX-100/250)	200 µL	100 µL
3.	QIAamp Blood DNA Mini Kit (Cat. No. 51304)	200 µL	100 µL

### PCR Protocol

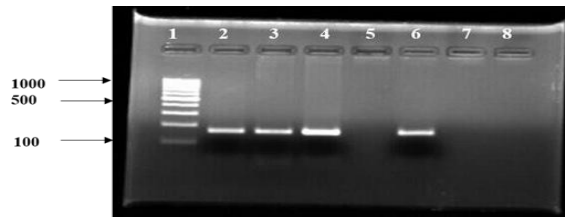
Components	Volume per reaction (25 µL)
D core qPCR mix (2X)	13.0
HPV Primer mix	1.5
Huwel PW	5.5
Extracted DNA /Huwel PW (NC)	5.0

## Quick Reference

### Thermal profile:

Steps	No. of cycles	Temperature (°C)	Time
1 (Initial denaturation)	1	95	15 min.
2 (PCR cycling)	50	94	20 sec.
		90	5 sec
		48	5 sec
		38	30 sec
		42	5 sec
		71	1.20 sec
		69	5 sec
94	5 sec		
3 Extension		71	4 mins

PCR products was analyzed by 2% Agarose gel electrophoresis. The size of the PCR product (150 bp) is shown in figure.



After getting a PCR amplified product for HPV, you can proceed with sequencing the product to determine the specific HPV genotype.

### Here are the general instructions for sequencing:

- 1.Clean up the PCR product: Remove any unincorporated primers, nucleotides, and other contaminants from the PCR product using a PCR cleanup kit or gel extraction kit.
- 2.Quantify the cleaned PCR product: Determine the concentration and purity of the cleaned PCR product using a spectrophotometer or fluorometer.
- 3.Prepare the sequencing reaction: Use a commercial sequencing kit or prepare your own sequencing reaction using appropriate reagents.
- 4.Sequence the product: Perform the sequencing reaction using a DNA sequences, by following the manufacturer's instructions.
- 5.Analyze the sequencing data: Use appropriate software to analyze the sequencing data and determine the HPV genotype present in the sample.

Note that the specific sequencing protocol and reagents used may vary depending on the specific HPV genotyping assay being used, so it is important to follow the manufacturer's instructions or established protocols for your specific assay



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