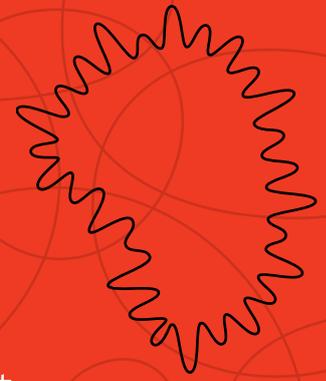


# PapillomaFinder™ SMART 20 PF4100-S (50 reactions)



A Real Time PCR based Multiplex assay to detect and differentiate 20 different HPV types simultaneously

## Overview

Cervical cancer is the second most common women's cancer worldwide. Human papillomavirus is the major causative agent. About 150 HPV types have been identified, of which about 40 can infect the anogenital region. HPV types are referred to as Low Risk (LR) or High Risk (HR), based on whether they put a women at risk for cervical cancer. HR HPV infection can lead to precancerous lesions, such as high-grade cervical intraepithelial neoplasia (CIN) as well as invasive cancer of the cervix.

## Targets

### Individual High Risk types

16, 18, 31, 33, 35, 39, 45, 52, 56, 58

### High Risk Pool

51, 59, 66, 68

### Low Risk Pool

6, 11, 40, 42, 43, 44

### Internal Amplification Control

β-globin

## Diagnostic specimens

- Cervical cytology samples
- Formalin-Fixed, Paraffin-Embedded cervical samples

## Quality

- Validated on WHO panels
- Validated on clinical samples
- Designed and produced under ISO13485:2003

## Features and benefits

- 20 human papilloma virus types in one assay
- Diagnosis within 6 hours
- As sensitive as monoplex Real Time PCR
- β-globin as Internal Amplification Control

# Procedure

Despite the developments in conventional PCR, the complexity of multiplex Real Time PCR is still limited due to the lack of sufficient detection channels. To achieve high-end multiplexing capacity on standard Real Time PCR machines, PathoFinder has developed the SmartFinder® technology. For every SmartFinder® reaction, up to 12 targets can be identified by means of melting curve analysis.

After a gene-specific multiplex reverse transcription step two unique probes hybridize specifically to the pre-amplified DNA of each pathogen present in the clinical specimen. Hybridized probes are joined by a ligation step and subsequently amplified using a universal PCR primer pair of which one primer is labelled with a fluorescent dye (FAM).

The detection of the amplified FAM labelled probes is by melting curve analysis on Real Time PCR systems. Twelve detection probes, either ROX or Cy5 labelled and varying in melting temperature, enable specific detection of the amplified probe and the corresponding pathogen. The Internal Amplification Control (IAC) is detected by a specific detection probe in an additional channel to validate negative sample results.

For more information about the SmartFinder® technology and SmartFinder® products, please visit our website:

[www.pathofinder.com](http://www.pathofinder.com).

# Detection systems

- Lightcycler 480 (Roche),
- Lightcycler II (Roche),
- Rotor-Gene 3000 or 6000 (Corbett),
- Rotor-Gene Q (Qiagen)

# References

Multiplex Real Time Assay for detecting up to 18 HPV types: M.Reijans, J. Ossel, R.Litjens, E.J. Speel, A.Hopman, G. Simons; 27th International papillomavirus conference and clinical workshop; 2011; Berlin, Germany.

