

## In-house RT-PCR assay for detection of human immunodeficiency virus type 1 (HIV-1) infection

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### Abstrak

Serologic assays are commonly used for screening (ELISA) and for confirmation (Western blot) of HIV-1 infection; however, both assays have potentially yielded the false-positive or false-negative results. In this study, a diagnostic RTPCR assay as an alternative test for detection of HIV-1 was developed. Forty-six plasma specimens from highly risky groups, who visited a voluntary counseling and testing for HIV (VCT) in Sanglah Clinic of General Hospital, Denpasar, Bali, were tested by RT-PCR assay with specific primers for Pol region of HIV-1 genome. The results of the RT-PCR tests were then compared with those of serologic tests to obtain the sensitivity and specificity of RT-PCR assay.

The results of this study showed that the RT-PCR assay could detect 17 (sensitivity: 65.4%) of 26 serologically positive specimens and was unexpectedly able to detect 2 (specificity: 90%) of 20 serologically negative specimens. Thus, the RT-PCR assay developed in this study is potential to be used as an alternative test, even though there are numerous aspects, particularly the sensitivity, that need to be improved in further research.