



## ampli set Lymphoma B<sup>CE IVD</sup>

45 tests

cat 1400

detection of rearrangements of the IgH.

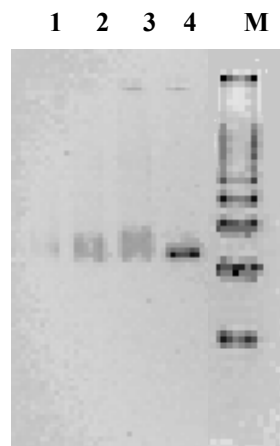
During the differentiation of B lymphocytes the rearrangement of the immunoglobulin creates unique DNA sequences. Such rearrangements are widely exploited as markers of B cell lineage and clonality in lymphoproliferative disease. This kit is a simple, optimised, polymerase chain reaction (PCR) based method for detecting the rearranged immunoglobulin heavy chain (IgH). It uses as primers oligonucleotides (Fr2A, Fr3A) homologous to the conserved sequences of the framework II-III regions and **LJH** and **VLJH** of the joining region. (JH). Monoclonality in a B cell population is indicated by the production of a single discrete fragment detectable on gel electrophoresis. The amplification product of a polyclonal population will result from a number of rearranged Ig genes, which will give rise to fragments of varying length, resulting in a broad band detectable on gel electrophoresis as a smear. The use of both primers (Fr2A, Fr3A) in two separate PCR reactions improves the detection rate to >95%. (specificity 100% sensitivity 2 x 10<sup>-2</sup>).

**Principle of method:** A) extraction of genomic DNA; B) amplification; C) detection on agarose gel

**Applicability:** on extracted and purified genomic DNA from whole blood samples or tissue

### ANALYSIS OF RESULTS

**Fr2A/LJH/VLJH**  
**LYMPHOPROLIFERATIVE DISEASE**  
 monoclonality  
 Samples produce one or two discrete fragments  
 (size 240-280 bp).  
**ABSENCE OF LYMPHOPROLIFERATIVE DISEASE**  
 polyclonality  
 samples produce a broad band (smear) (size 240-280 bp)

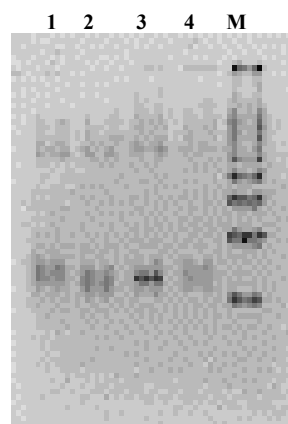


Samples 1,2,3 = polyclonal pattern

Sample 4 (Control DNA Fr2A) = monoclonal pattern

M=Marker 100bp ladder

**Fr3A/LJH/VLJH**  
**LYMPHOPROLIFERATIVE DISEASE**  
 monoclonality  
 Samples produce one or two discrete fragments  
 (size 80-120 bp).  
**ABSENCE OF LYMPHOPROLIFERATIVE DISEASE**  
 polyclonality  
 samples produce a broad band (smear) (size 80-120)



Samples 1, 2 = polyclonal pattern

Sample 3 = monoclonal pattern

Sample 4 (Control DNA Fr2A) = polyclonal pattern

M=Marker 100bp ladder

### REFERENCES

*Blood* (1991), 78:192-196.  
*J Clin Pathol* (1992), 45:770-775.