

ENGLISH LANGUAGE TABLES

EuroClonality / BIOMED-2 guidelines for interpretation and reporting of Ig/TCR clonality testing in suspected lymphoproliferations

Original publication

EuroClonality / BIOMED-2 guidelines for interpretation and reporting of Ig/TCR clonality testing in suspected lymphoproliferations.

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Table 3 Typical expected Ig / TCR profiles under different immunobiological conditions

<i>Immunobiological condition</i>	<i>Examples</i>	<i>Expected profile in PCR reaction</i>
-no lymphocytes	-non-hematopoietic tissue	-no peaks / bands (w/o background) ^a
-paucity of lymphocytes	-small infiltrate, small sample (e.g. skin)	-(minor) peaks / bands, <u>not reproducible</u>
-(immune)activation with dominant clones	-dominant immune response (e.g. infection, autoimmunity)	-(multiple) peaks / bands, <u>reproducible</u>
-reactive lymphocytes	-broad immune response	-(irregular) Gaussian curve / smear
-monoclonality (mono-/bi-allelic)	-leukemia, lymphoma, (clone of unknown significance) ^b	-1 or 2 peaks / bands ^c
-monoclonality + polyclonal background	-idem,(small) clone between normal/reactive lymphocytes ^b	-1 or 2 peaks / bands ^c + Gaussian curve / smear
-monoclonality (somatically mutated)	-idem, (post-)follicular B-cell process	-no peaks / bands ^d (or Gaussian curve / smear from remaining normal lymphocytes) ^a

^a Non-specific peak(s) / band(s) might be observed

^b Clone of unknown significance is mostly seen under conditions in which there is some residual background of polyclonal cells

^c Number of peaks / bands is dependent upon competition in PCR reaction; for IGH and TCRB loci up to 4 clonal products may be compatible with one clone

^d Represents false-negative result

Table 4 EuroClonality uniform system for technical description

<i>Type of profile per tube (in duplicate)</i>	<i>Technical description per tube</i>	<i>Optional: more detailed technical description^a</i>
-no peaks / bands (but: poor DNA quality)	-no (<u>specific</u>) product, poor DNA quality	
-no peaks / bands (w/o background)	-no (<u>specific</u>) product	- <u>non-specific</u> product(s) (... nt)
-1 or 2 <u>reproducible</u> clonal peaks / bands ^b	-clonal (... nt)	-weak clonal (... nt) -clonal (... nt) + polyclonal background (Gaussian curve / smear)
-1 or 2 <u>non-reproducible</u> (clear) peaks / bands ^b	-pseudoclonal	
-multiple (n ≥3) <u>non-reproducible</u> peaks / bands ^b	-pseudoclonal	
-multiple (n ≥3) <u>reproducible</u> peaks / bands ^b	-multiple products (n= ...) (... nt)	
-Gaussian curve / smear ^c (with or without minor reproducible peaks / bands ^b)	-polyclonal (not clonal ^c)	-irregular polyclonal (not clonal ^c)
-pattern that cannot be categorized as one of the above	-not evaluable ^d	

Abbreviations: nt, nucleotide

^a Examples of more detailed technical description options that can be chosen by the user

^b In HD analysis the number of bands does not necessarily reflect the number of different PCR products, as additional heteroduplexes can be formed between products

^c In HD analysis a polyclonal smear may not always be smooth or clear, despite specific product in gel; hence this is scored as "not clonal"

^d In less than 5% of PCR results the description per tube cannot be made

Table 5 EuroClonality uniform system for molecular conclusion

Overall technical description for all Ig or TCR targets	Molecular interpretation / conclusion	Optional: more detailed molecular interpretation ^a
-no (<u>specific</u>) product, poor DNA quality	-not evaluable, due to poor DNA quality	
-no (<u>specific</u>) product	-no rearrangement in Ig/ TCR targets detected	
-clonal (... nt) ^f	-clonality detected	-clonality detected (biallelic products) -clonality detected (biclinality) -clonality detected (minor clonal product) -clonality detected (isolated rearrangement) -clonality detected (with caution, plus advice for follow-up analysis / new sample) -clonality detected in addition to background of B / T cells
-pseudoclonal (one or more <u>non-reproducible</u> products)	-no clonality detected, suggestive of low template amount	
-multiple <u>reproducible</u> products (n ≥ 3) ^b	-oligoclonality / multiple clones detected	-dominant clone in oligo/polyclonal background
-polyclonal (not clonal ^c)	-polyclonality detected (no clonality detected ^c)	-polyclonality detected plus minor clone of unknown significance ^d
-not evaluable	-not evaluable ^e	

^a Examples of more detailed molecular interpretation options that can be chosen by the user

^b For IGK and TCRB loci up to 4 clonal products may be compatible with one clone

^c In HD analysis a polyclonal smear may not always be clearly detectable, despite specific product in agarose gel; hence this is scored as “not clonal”

^d For those cases in which minor reproducible peaks / bands are detected in the polyclonal background

^e In less than 5% of cases the molecular interpretation cannot be made

^f Clonal peaks / bands are not necessarily seen for every Ig/TCR target analyzed to reach the molecular conclusion “clonality detected”