

- ✓ *imegen-Quimera Screening Multiplex Plus*
- ✓ *imegen -Quimera dPCR kits*

Molecular chimerism analysis after allogeneic transplantation, has become a well-established method to monitor the transplant evolution and to assess the risk of relapse.

**imegen-Quimera Screening Multiplex Plus:** This kit allows the analysis of 16 different insertion/deletion (INDELs) polymorphisms by real time PCR Multiplex in order to detect an informative marker to follow-up the transplanted patient. It is considered that a polymorphism is informative when it is detected in the transplanted recipient and not in the donor. SRY and RhD polymorphisms were not included in the panel of imegen-Quimera Screening Multiplex Plus because their molecular analysis is not necessary to determine the informativeness. SRY is informative when the recipient is male and the donor is female. RhD is informative when the recipient has an Rh+ blood group and the donor has an Rh- blood group. The overall cumulative informativeness of this panel, along with SRY and RhD polymorphisms, is 99.1%. \*

**imegen-Quimera dPCR kits** can determine the presence of hematopoietic chimerism in the post-transplant period by digital PCR. Thanks of a quantification of insertion/deletion (INDELs) polymorphism or null alleles, regarding to the total amount of reference DNA present in the sample. In order to perform the quantification, it is necessary to analyze a gene reference ( $\beta$ -globin) and an informative polymorphism.

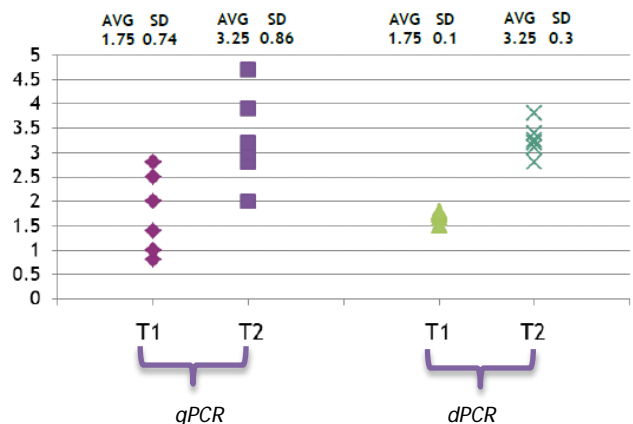
- *imegen- Quimera dPCR kits* duplex-assays perform highly sensitive and accurate monitoring. The duplex assays represent 18 DIP-marker combined either with a reference gene (DIP/REF).
- *imegen- Quimera dPCR kits* approach supports the early detection of graft failure, transplant rejection or threatening relapse though highly accurate and sensitive measurements.



*\*If our kit fails to detect the informative marker, contact us to provide an alternative.*

SENSITIVITY	
Fragment analysis	dPCR
1%	0.05%

Therapeutic action from 0.1%



qPCR: 25% of error

dPCR: ≤ 5% of error

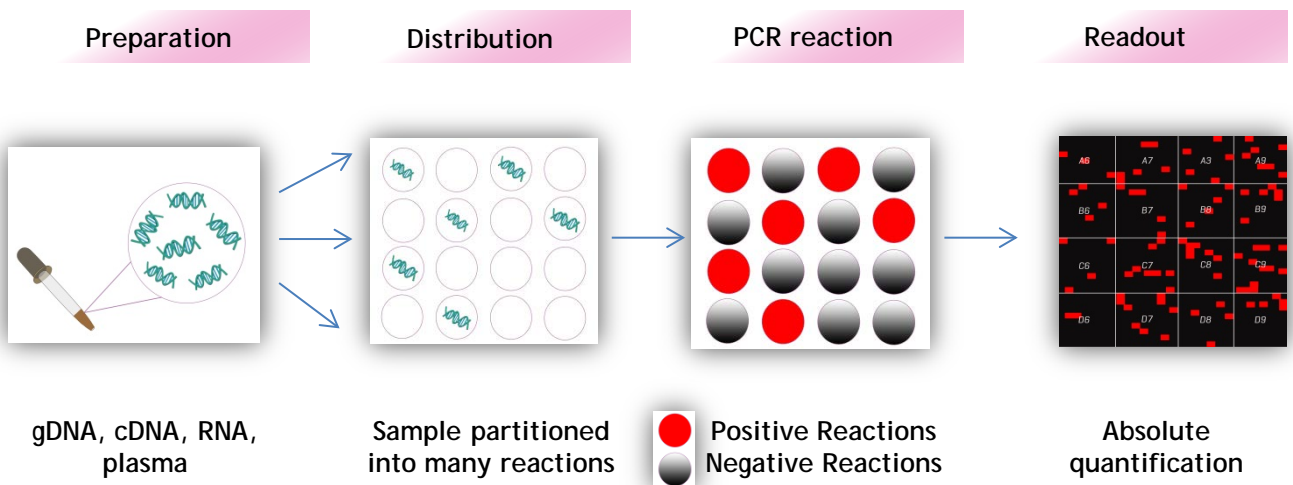
Earlier relapse detection with dPCR

## Features of *imegen-Quimera* Screening Multiplex Plus & *Imegen-Quimera* dPCR kits

- Validated in Clinical Studies
  - Optimal Suitability for Mixed Chimerism
  - High Reproducibility
- Secures Results
- No Replicates Required
  - No Standard Curves Required
  - Duplex Assay Design (DIP/REF)
  - Possibility to be Combined with other *Imegen* Products
  - End point PCR (no real time PCR equipment required)
- Reduces hands-on time

### Technological aspects of dPCR

The PCR volume is partitioned into 20.000 individual reactions, each one of few picolitres in volume. By computing the number of positive partitions (those that receive a copy of the template), absolute quantification is calculated applying Poisson statistics.



imegen-Quimera dPCR kits describes allele-specific duplex-assays for highly sensitive and accurate chimerism monitoring. Available assays are shown below:

INDELs	Insertion (Allele +)	Deletion (Allele -)
SRY	X	
RhD	X	
Q116-6I	X	
Q116-3I	X	
Q116-7I	X	
Q116-12D		X
Q116-11I	X	
Q116-5I	X	
Q116-4I	X	
Q116-10I	X	
Q116-23I	X	
Q116-28I	X	
Q116-32I	X	
Q116-31I	X	
Q116-30D		X
Q116-29D		X
Q116-27D		X
Q116-24I	X	

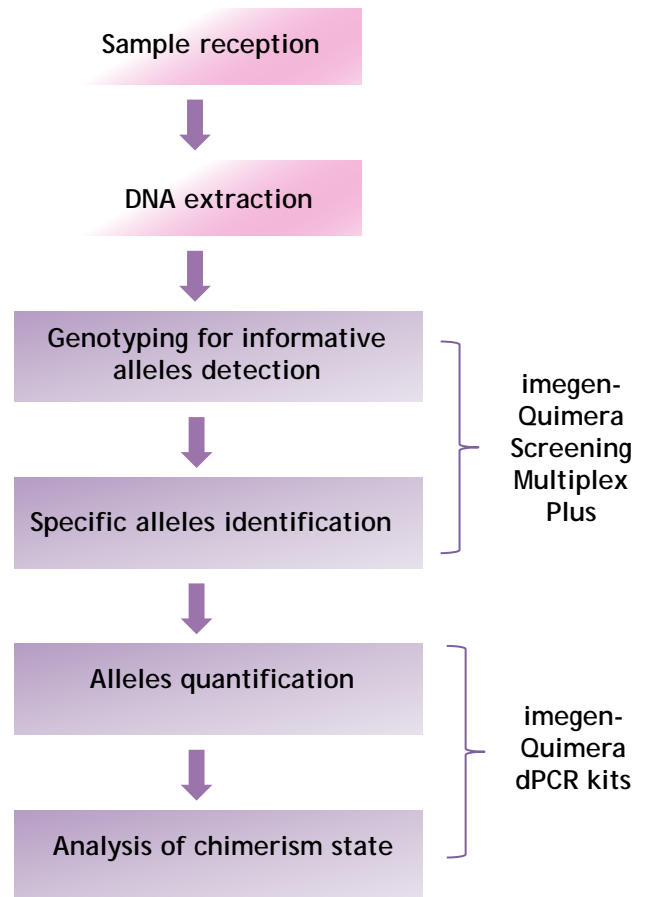
Table 1. imegen-Quimera dPCR kits

### Advantages of imegen-Quimera Screening Multiplex Plus & imegen - Quimera dPCR kits

- ✓ The screening allows 5 pairs donor/ analyses
- ✓ Absolute quantification
- ✓ Endpoint detection
- ✓ No need for replicate analysis
- ✓ No need for standard-curves
- ✓ Small amounts of DNA required
- ✓ Screening with accumulated information (Screening + SRY + RhD) of 99.1%

imegen-Quimera Screening Multiplex Plus kit allows the analysis of 16 different insertion/deletion (INDELs) polymorphisms by real time PCR Multiplex with only 8 PCR reactions. Thus, in a 96-well plate it could be analysed 6 donor/recipient couples.

### Workflow with imegen- Quimera kits



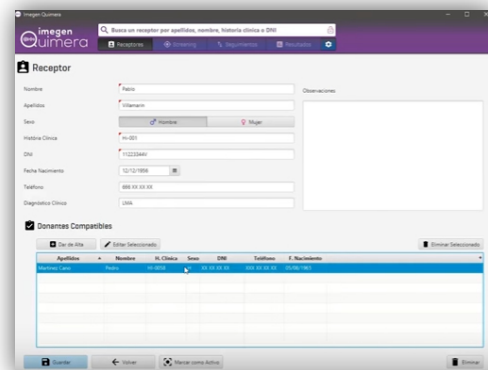
- ✓ Accurate results in mixed-chimerism status
- ✓ Excellent detection of residual cells
- ✓ High assay reproducibility
- ✓ Tracking software
- ✓ Easy to perform
- ✓ Reduced hands-on time
- ✓ Lower handling market
- ✓ No need pre-transplanted sample analysis

## Additional Information: Our software

imegen developed a new software to facilitate the analysis of molecular chimerism resulting from allogeneic transplantations.

The objective of this software is to help medical doctors control the evolution of transplantation in patients and to assess the risks of relapse.

This software is simple and intuitive and allows monitoring the patient's evolution very accurately.



## Ordering information

imegen-Quimera Screening Multiplex Plus	Order number
10 rxn	IMG-116-26

INDELS	rxn	Kit reference
SRY	12	IMG-116-27
RhD	12	IMG-116-28
Q116-6I	12	IMG-116-32
Q116-3I	12	IMG-116-29
Q116-7I	12	IMG-116-33
Q116-12D	12	IMG-116-36
Q116-11I	12	IMG-116-34
Q116-5I	12	IMG-116-31
Q116-4I	12	IMG-116-30
Q116-10I	12	IMG-116-35
Q116-23I	12	IMG-116-37
Q116-28I	12	IMG-116-42
Q116-32I	12	IMG-116-46
Q116-31I	12	IMG-116-45
Q116-30D	12	IMG-116-44
Q116-29D	12	IMG-116-43
Q116-27D	12	IMG-116-41
Q116-24I	12	IMG-116-38

Table 2. imegen-Quimera dPCR kits references



# imegen

Instituto de Medicina  
Genómica, S.L.

Agustín Escardino 9,  
Parc Científic de la  
Universitat de València 46980  
Paterna (Valencia, Spain)

[imegen.es](http://imegen.es)

*Worldwide technical support*

+34 963 212 340