



## Your results in your lab in less than 48 hours!

The iCS-digital™ PSC kit range offers a high level of performance for optimum detection of recurrent abnormalities in human pluripotent stem cells. Its sensitivity enables the identification of sub-karyotyping abnormalities that G-Banding would miss. Its fast turnaround makes it an ideal test for in-routine control in hPSC cultures at various stages of the workflow: amplification/maintenance every 5-10 passages and for screening clones. Compatible with Bio-Rad QX ONE, QX 100, QX 200 and QX 600 machines, it is available as a 24-probe test or 20q-only\*. \*Both also available as a service.

### iCS-digital™ range key features and benefits:

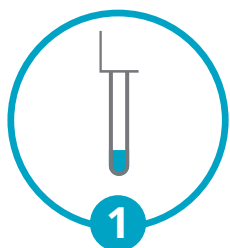
- Available as a 24-probe test (92% of recurrent genomic abnormalities in hPSCs) or a 20q-only kit (the most recurrent chromosomal alteration found in hPSCs)
- Available in 20 or 40 reactions
- Easy and ready to use
- High reproducibility without the need to run replicates
- Limit of detection: 20% mosaicism
- Results in less than 48 hours
- Automated analysis and interpretation with our online iCS-digital™ software
- A support team available to help you



## Methodology and technology used

iCS-digital™ PSC combines the high-level performance of digital PCR with an in-depth data analysis from 100+ scientific publications based on 900+ hPSC and hESC samples. After exclusion of polymorphic variants, Stem Genomics highlighted 738 recurrent genetic abnormalities (i.e. genomic defects found in at least five different publications) itemized in their proprietary "SMART database". The test was published in Stem Cell Reports (Assou et al., 2020).

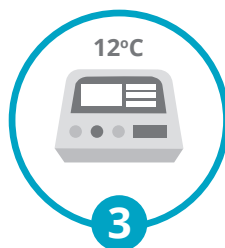
## How does it work?



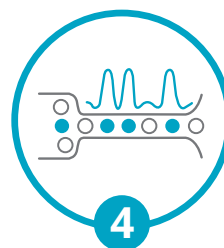
**1**  
SAMPLE PREPARATION  
1 HOUR



**2**  
PCR  
2 HOURS



**3**  
HOLD TIME  
2 HOURS  
TO OVERNIGHT



**4**  
DROPLET READING  
15 MIN



**5**  
RESULT ANALYSIS  
20 - 30 MIN  
(ANALYSIS & REPORT GENERATION)



**Stem Genomics**

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## Can *iCS-digital™ PSC* be used on its own for genomic stability when publishing?

Some publications have validated studies with *iCS-digital™ PSC* used as the [sole genomic stability test](#) (Stem Cell reports, Stem Cell Research and therapy, Cells and Current Eye Report (Brot et al. 2022, Duchesne de Lamotte et al. 2021, Roudaut et al. 2021, Rupendra Shrestha et al. 2020. to name a few)). It really depends on the context of your research and the reviewers.

## If we perform *iCS-digital™ PSC* to check the genomic stability of hPSCs, can we skip analyses such as G-Banding karyotype?

You can, at the [amplification and maintenance](#) stage, or during [clone screening](#). However, we strongly recommend [associating the \*iCS-digital™ PSC\* test with G-Banding](#) at the [acquisition of a new cell line or banking stage or at the end of the process](#). G-Banding will provide a [pangenomic view](#) that you won't get from a very targeted digital assay such as *iCS-digital™ PSC*. [Ideally, they should both be combined](#), as in our [Duo \*iCS-Karyo\*](#) assay.

## What is included in the kit?

We provide [oligonucleotides](#) to amplify and detect 24 targets or 20q only. You need to provide the PCR and restriction enzymes, as well as the nuclease-free or biomolecular-grade water.

## Is the kit compatible with other digital PCR systems?

We are constantly expanding our kit offering. Contact us directly for the latest updates.

## Is the final report difficult to interpret?

Not at all. It is a very [straightforward report](#) that gives you a clear indication of the abnormalities found and the CNV values for each targeted region. A sample report is available on request.

## How do I get the interpreted report?

[Individual access](#) to our web-based *iCS-digital™* analysis software is included with the kit. You just need to [import your raw data](#) from the dPCR run into

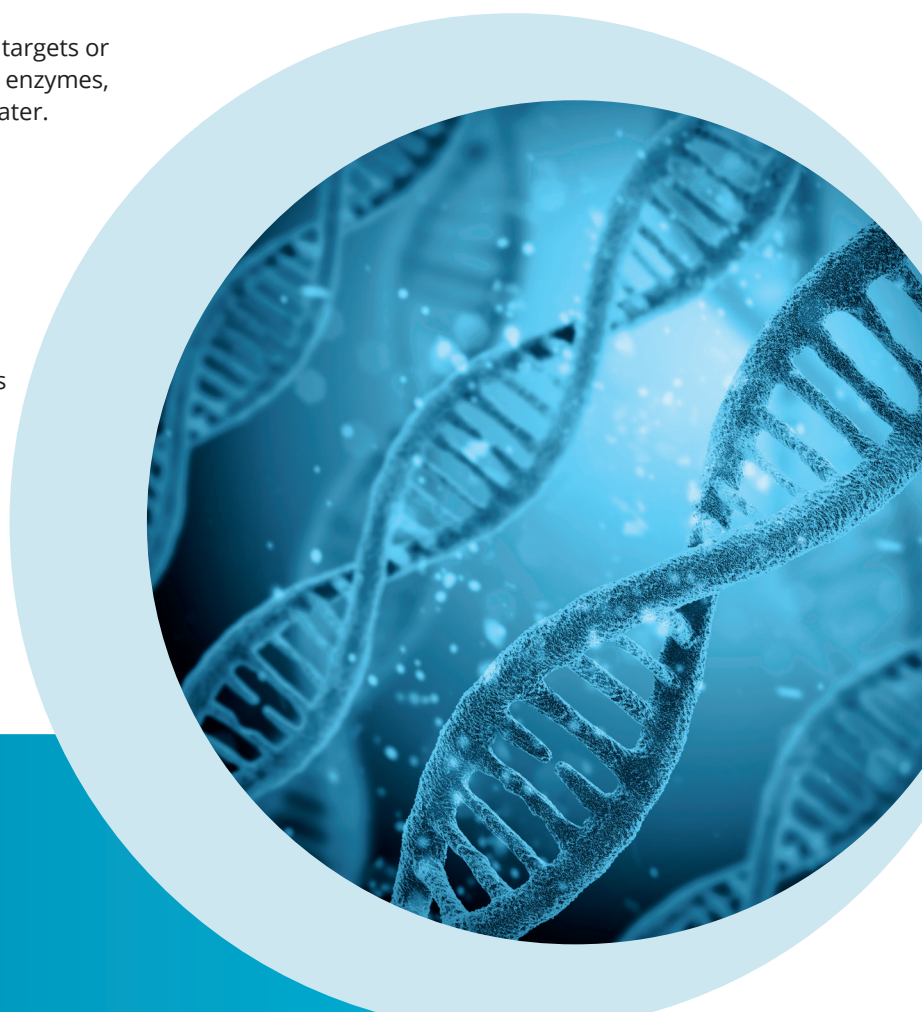
the [software](#) and it will analyze it and generate your final report in a [couple of seconds](#).

## Can this assay be used for other stem cell types?

Stem Genomics has designed another similar assay for detecting abnormalities in [Mesenchymal Stromal Cells \(MSCs\)](#) called *iCS-digital™ MSC* and a standard assay for any other human cell type called *iCS-digital™ Aneuploidy*, both available as a service.

## Is your assay range focused on genomic stability or can you support stem cell researchers with other useful assays that we can integrate into our QC?

In accordance with the [ISSCR's latest quality standard](#) recommendations, we strongly recommend regularly checking the [identity](#) of your cells during their time in culture with our [STR assay](#). [Mycoplasma](#) testing is also critical for robust science and we have a digital PCR solution called [Myco-digital](#) that can do that for you. Available as a service.



For more information,  
please contact us at

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